EXCLUSIVE ROBERT RAVER MAKES A SCENE

p.18

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July/August 2024

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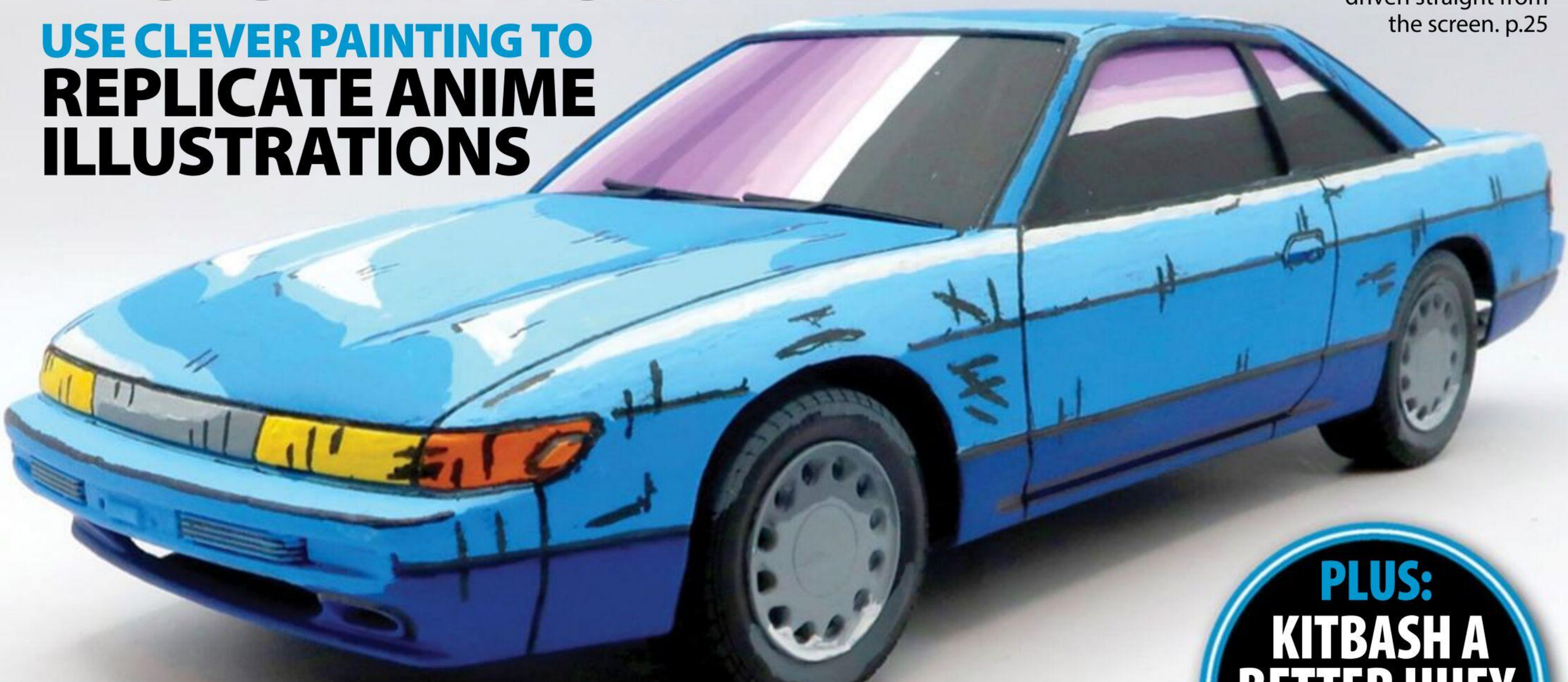
USE CLEVER PAINTING TO REPLICATE ANIME ILLUSTRATIONS

Inspired by the Japanese series *Initial D*, Chad Truss finished a Tamiya 1/24 scale Nissan Silvia S13 as if it had driven straight from the screen. p.25



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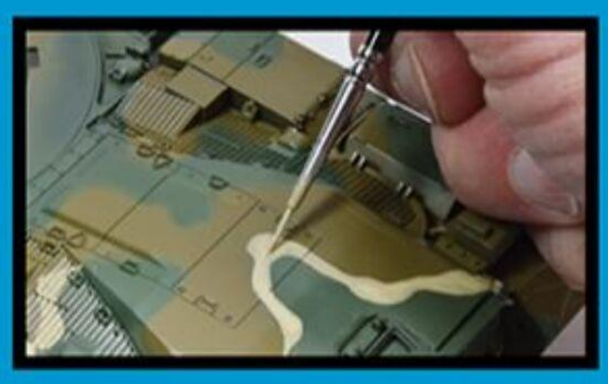

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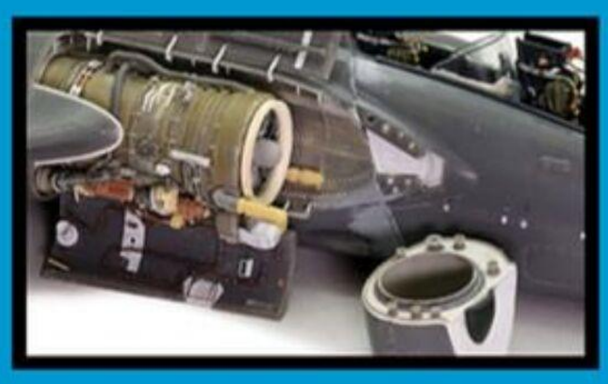

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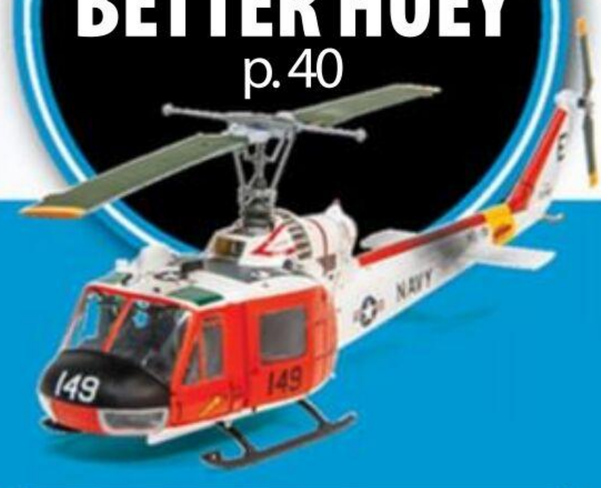

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Vol. 42 · Issue 4

VISIT…

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German Panzer1 Ausf.B

1/35 German Panzer 1 Ausf.B AND Zundapp KS750 Motorcycle in a Single Kit (13556)

German Panzer 1 Ausf. B's battlefield performance was limited by its thin 13 mm armor and two meager 7.92 mm MG 13 machine guns. While it took part in the invasion of Poland and France, like other early Panzers, the Ausf.B was created to develop tank building techniques and train crews for future tank divisions. The Panzer 1 was the forerunner of the Tiger, Panther and other feared German tanks.

Academy's Ausf.B accurately depicts the leaf spring suspension, includes five markings, photo-etched parts, and a turret hatch to build open or closed. Tools: shovel, wire and cutters, crank, ax, tow hook and fire extinguisher.

The same box contains the popular Zundapp 750 motorcycle kit with sidecar and replete with accessories, including 7.92mm MG34 machine gun, Kar 98k rifle and MP-40 sub-machine gun. There is a seat for a third soldier behind the driver. Front wheel handlebars are movable, storage boxes, spare tire, detailed spokes, license plate, head light and more, plus three accurate figures between the two kits.

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FROM THE EDITOR

By Aaron Skinner

Are you ready for BAMM 2024?

We are! The first two successful events included the online model contest, sweepstakes, affiliated make-and-takes, and stories from readers about how they are introducing new people to the fun that is our hobby.

This November will feature many of the same events — and maybe a surprise or two along the way. That means you have five months or so to finish up your entries for the contest.

While you are at it, sit down with your modeling friends over coffee, tea, or something stronger and brainstorm what you will do to bring new people into the fold. You can organize a make-and-take at a local hobby store with your club or give a presentation at a youth group, library, senior center, or pretty much anywhere else people gather. Share some tips and techniques for building these miniature creations we love so much. Show off your work. Above all, make it fun!

editor@finescale.com

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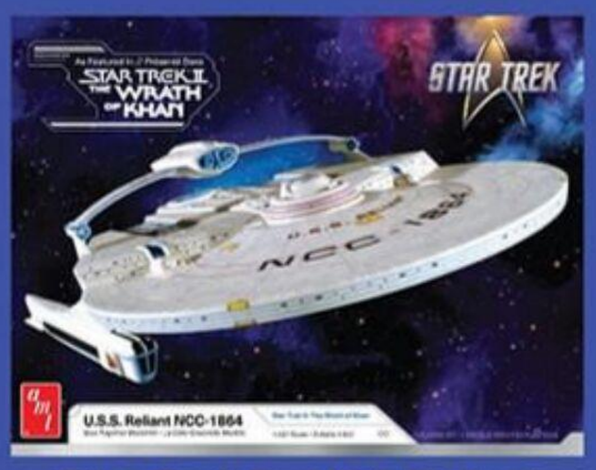
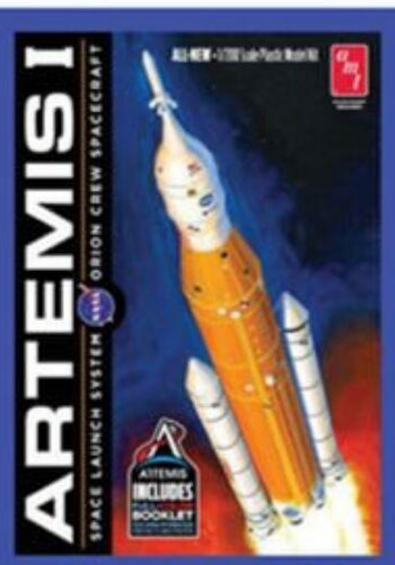


Star Trek II - USS Reliant

1961 Moon Suit

Metropolis

The Creature



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SCALE TALK

Your voice in *FSM*

Holding small parts for painting

Ed.: In a recent FSM *Scale Model Basics video, we demonstrated several ways to hold parts, especially small ones, for painting. We asked if any of you had other techniques and received several suggestions.*

[Poster] putty on the end of a toothpick or skewer can hold a part, provided the putty has not lost its tack from other usage. Too much pressure from an airbrush may knock the part off, or a heavy hand with a paint brush may separate the part from the putty. Sticky putty on the end of a toothpick is also helpful for picking up small plastic parts and small photo-etched metal parts.
– Robert Walker
via FineScale.com

I will superglue a straight piece of sprue in an inconspicuous area on the underside of some parts. This can simply be broken off when I'm done painting.
– @PlasticImagination Workshop
via YouTube

Heat-shrink tubing can be applied over the teeth of alligator clips so they won't mark or damage any surface to which they are attached.
– @MatterusOD
via YouTube

[I] have used a 1-inch dowel covered with duct tape to paint cars and tank hulls. Different dowels can be used to hold a variety of differently sized and shaped parts.
– @richardjordan5036
via YouTube

I tend to limit my methods for holding parts for painting to clips and masking tape. Alligator clips and larger clips are great if you can find an area on the part that they can be attached. For other parts, I wrap the end of skewers with tape and stick the parts to it. I tape larger parts to pieces of cardboard. In a future video, it would be great to cover ways to hold small parts for cleanup. I don't know how many model parts have been lost to the carpet while I am trying to hold them for cleanup after removing from the sprue.
– George Blair
via FineScale.com

Ed.: Thanks everyone! So many cool ideas. George, we'll look at making a video about cleaning up small parts. – Aaron Skinner

Making modeling a priority

I read your "Making time for the workbench" editorial in the March/April 2024 issue with interest. Time management at work and at home is a tough balancing act at the best of times. Many years ago, a colleague gave me a tip that I have always found helpful. He said, "Regarding a task, every time you say the phrase, "I haven't got time to do it," repeat it more honestly by saying, "It's not high enough on my list of priorities." We *always* have time, it's the way we prioritize the use of that time that is the issue.

Another trick I use is to have a little notebook in which to write a brief description of the task, the date that I thought of the task, and the date that I completed it. I try once a week to review the tasks listed, add new ones, sign off completed ones, and reflect on my progress. Sometimes I shame myself into doing tasks that have hung around for weeks, months, and, dare I say it, years.
– Arend Hoogervorst,
Kloof, South Africa

Playing in premixed or DIY mud?

Ed.: In a Scale Model Basics video, we pondered the value of premixed mud and looked at alternatives. Several viewers responded with suggestions and mud recipes.

I use oil pastel or white blackboard chalk, ground and mixed with paint to achieve the required color. This gives the resulting mud a little graininess, which can also be used for rubble.

The final thing I add before applying the mud to the model is a little white glue to help the mix stick.
– @richardjordan5036
via YouTube

Could you use real mud and set it with PVA glue?
– @destinyangel
via YouTube

Ed.: I mean I guess you could, but the scale is likely to be off. You can try adding real dirt or mud to things like acrylic gel medium or white glue for texture, but we'd hesitate to recommend real mud. – A.S.

Great video! I've gotten very good results making mud using baby powder, white glue, and acrylic paint. Sometimes I add water to get a thinner consistency. I'll also add

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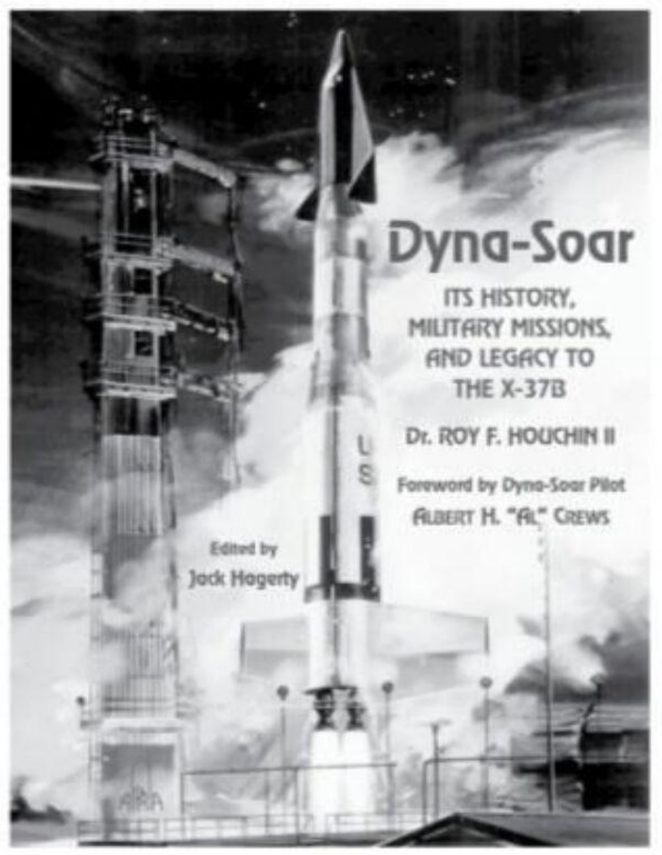
Dyna-Soar: Its History, Military Missions and Legacy to the X-37B

Five years in the making by Air Force historian Dr. Roy Houchin, with full access to all official documents, this will be the definitive work on the program for some time to come.



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model railroad ballast, static grass, or moss for texture. The possibilities are endless.
– *@69bird3*
via YouTube

When adding mud to a model, you can mix methods and mixes.

If you want a heavy layer over a larger model, you can use a cheaper method to build up 75-80% of the mud. I'd still use a pigment to get it as close to your intended color as possible. Then finish with a premade mud, which is nearly always going to give you a better texture and more accurate color — unless you are a ninja with mixing. You don't even have to do full coverage with the premade mud. Adding just enough in critical areas will usually suffice.

But with all mud, and really any natural weathering effects, I always follow up with some washing, dry-brushing, and touch-up on the mud. Natural elements such as dirt are never uniform. Washing and dry-brushing will enhance the texture and help bring the effect into scale by creating artificial lighting effects. Further dry-brushing with related shades of the mud color can provide some variation that will look much more natural.

Finally, get a small paintbrush and several shades of green and gray paints and pick out some stones and flecks of grass that might not be 100% covered in mud. These little details will really help create a true-to-life effect.
– *@backpacker3421*
via YouTube

Sealing pastels and pigments

Ed.: In the comments on a video about weathering with pastels and pigments, we received this question:

It wasn't mentioned, but how do you seal powdered pastels and pigments? I always seal my model at the end, but I have found that, in the case of pastels, sealing with something like Testors Dullcote clear flat, diminishes or eliminates the effect. How can you seal the finished model and maintain the pastels? Is there any way to prevent the pastels coming off during handling or judging at a model contest?
– @hangerbird
via YouTube

Ed.: Typically, applying pastels and pigments is the last step in weathering a model, and they aren't sealed under a clear coat. You'll want to get them to adhere and be more resistant (although not impervious) to the touch with pigment fixer, but after that, you're done. Obviously, this causes issues when dusting a model, which is why a cover or display case is a good idea. If you need to handle the model, avoid areas where the pastels or pigments were applied. If you are concerned about models being moved during judging, the best option may be to fix them to bases so no one has to touch the model. – Tim Kidwell

Photo-etched metal tips welcome

Ed.: The video, "Dos and don'ts with photo-etched metal parts" prompted several responses, many concerned about the fate of the part that departed Aaron's tweezers.

Nice video on photo-etched metal (PE) basics. I have not yet ventured down that path, but have a few kits with some PE just waiting, so I'll have to check out the other PE videos. The tips are greatly appreciated. I can relate to small parts flying into the ether because I've lost many small parts to the carpet gods over the years; it is much like Charlie Brown's kite-eating tree. I've even thought of spraying very small details with international red or orange before beginning so they would be easier to find. They could be touched up with the right color using a fine brush later.
– *Greg Winter*
via FineScale.com

Inexpensive diamond needle files work great for sanding the nubs off PE parts. They remove material on the forward and back stroke and won't snag and bend the PE part like steel files can.
– *@69bird3*
via YouTube

Great information, but can you address adding photo-etched metal part to a canopy or other clear plastic parts? Would you use PVA or white glue for that situation? Or other types of clear glue? Thanks in advance.
– *Gary Bracht*
via FineScale.com

Ed.: Attaching anything to clear plastic is a dicey proposition. Clear-part glue would work, but even though it dries clear, it has volume and may be visible. So, minimize how much you use and limit it to less visible spots on the part, say under a frame. You could also try attaching it with clear gloss acrylic. – A.S.

I personally prefer the Xuron nippers for photo-etched metal as I have little or no clean-up afterwards on the removed parts. I have also recently come to appreciate Ammo Ultra Glue for attaching PE parts as it allows some time for positioning and will not fog clear parts nearby.
– *@scottbuildsthemall*
via YouTube

Great tips, some so logical I am a bit embarrassed they hadn't occurred to me. Or I was just taking the lazy route.

Hey, did you ever find the photo-etched metal piece? I laughed out loud when it happened.
– *Kelly Dodge*
via FineScale.com

Ed.: Glad we could make you laugh, and it's funny you should ask about the part. We were in the studio a couple of weeks later and I looked down and there was the part in the rug under the bench. Apparently, the carpet monster was done with it. – A.S.

Seeing clear parts more clearly

Ed.: The SMB video, "5 mistakes to avoid with clear parts" generated a few comments and questions.

Another great video, thank you. One thing I will do at times is use an empty parts tree to test adhesives and check for reactions. Once a part is fogged or crazed, there's no amount of polishing it seems that can ever bring it back.
– Paul Jenkins
via FineScale.com

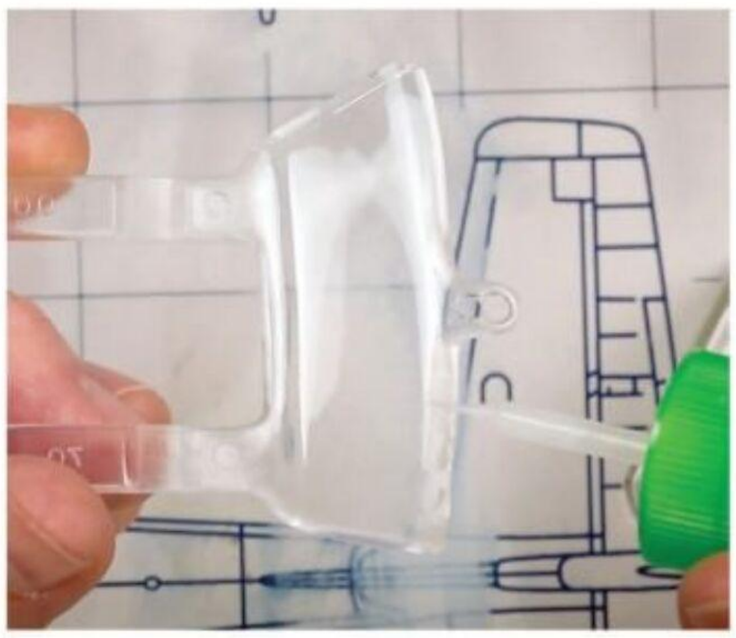
Ed.: In our experience, because the glue is altering the plastic all the way through, there is little you can do to repair that sort of damage beyond replacing the part. – T.K.

Can you make sprue goo from clear sprues?
– *Duane Barr*
via FineScale.com

Ed.: I've never made sprue goo with clear plastic. While possible, the plastic is more brittle than colored styrene and will probably have a different consistency. – T.K.

What do you think about using Microscale Micro Krystal Klear or Micro Liquitape to attach clear parts?
– *Anthony Dembeck*
via FineScale.com

Ed.: Microscale Micro Kristal Klear is specifically designed for use with clear parts, so by all means use it. In another video, we tested Microscale Micro Liquitape and it works. FSM *reviewer Andy Keyes uses Liquitape to attach clear parts on planes that he wants to be able to remove to show interior details and then reattach them when finished, so it, too, is a viable option. – T.K.*



What to avoid: Applying liquid plastic solvent cement directly to clear plastic.

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HeritageCon 16 model contest photo gallery

The Canadian Warplane Heritage Museum in Mount Hope, Ontario, houses a terrific collection of warbirds, so it's a great setting for a scale model contest! One of the largest model shows in Canada, the 16th annual contest featured more than 750 models on the tables and 2,500 attendees from all over Canada and the northeastern United States. **Visit FineScale.com/show-galleries** to see photos of some of the best models this year.

Scale Model Basics how-to videos

Don't miss Scale Model Basics Season 3! *FSM* brings you a variety of how-to advice, from repairing scratches in clear parts to applying isopropyl alcohol to remove paint from your plastic kit parts. *FineScale Modeler*'s editors want to help you make your best models, so visit **FineScale.com/videos** to see tips about tools, techniques, and skills. And be sure to leave a comment or your own tips to help other viewers!

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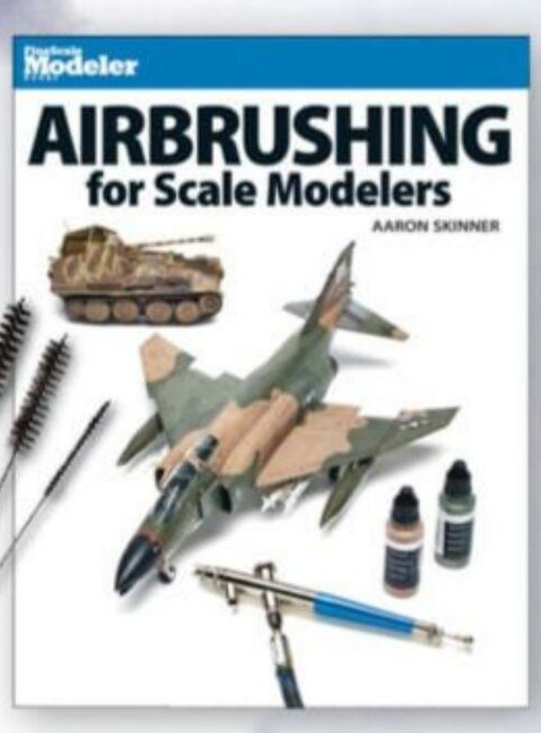

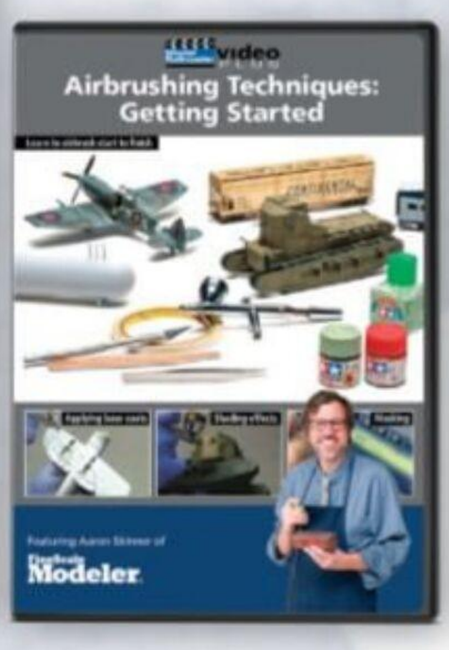

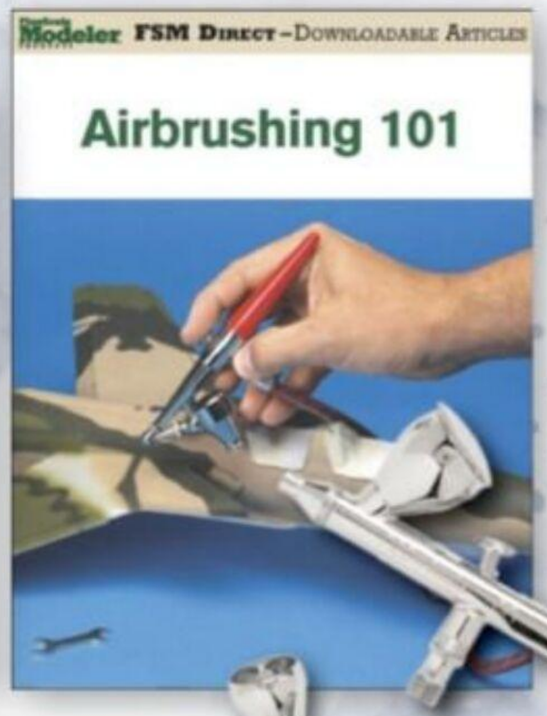

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AIRCRAFT

1/48 SCALE

P-47D-30RA Thunderbolt advanced kit from MiniArt, No. 48029, $TBA.
US B-24J Liberator from HobbyBoss, No. 81774, $159.99. **WBR**
Macchi C.200 from Italeri, No. 2767, $43.
P-47D-28RE Thunderbolt "Free French Air Force" from MiniArt, No. 48015, $TBA.
Messerschmitt Bf 109G-10 from Revell, No. 15873, $18.99.
B-26B Marauder from ICM, No. 48320, $154.99. **WBR**

1/72 SCALE

Vultee Vengeance Mk.I/IA from Dora Wings, No. DW72038, $66.99. **WBR**
Tachikawa Ki-54 Hickory Captured and Post War Service from Special Hobby, No. SH72485, $33.99.
SIAI-Marchetti SF-260 EA/EU/D Late Bulged Canopy Type from Special Hobby, No. SH72433, $TBA.
KF-21 ROKAF Boramae from Academy, No. 12585, $28.
PZL P.11c Polish fighter "Rare Birds" from IBG Models, No. 72520, $11.76.
Focke-Wulf Fw 190D-11 Sorau Factory Series from IBG Models, No. 72533, $TBA
PZL P.24A/F fighter in Turkish service from IBG Models, No. 72553, $11.76.
F-84F Thunderstreak "Reborn Luftwaffe" from Special Hobby, No. 72505, $37.99.
F-84F Thunderstreak US Swept-Wing Fighter from Special Hobby, No. 72395, $32.99.
AJ-37 Viggen "Show Must Go On" from Special Hobby, No. 72497, $TBA

1/144 SCALE

Tu-22M3 "Backfire-C" Russian Air Force from Academy, No. 12636, $17.

ARMOR

1/35 SCALE

Jagdpanzer 38(t) Command Version with Winterketten from Takom, No. 2181, $TBA
Flakpanzer 38(t) Kugelblitz from Takom, No. 2179, $46.95.
Flammpanzer 38(t) from Takom, No. 2180, $46.95.
Leopard 2A7V German main battle tank from Takom, No. 35387, $62. **WBR**
StuG III Ausf G Alkett Prod. October 1943 from MiniArt, No. 35352, $TBA
M3 Stuart Initial Production from MiniArt, No. 35401, $TBA
M3 Stuart Initial Production from MiniArt, No. 35425, $TBA
Bedford QL from Italeri, No. 0241, $38.46.
7TP Polish tank single turret early production from IBG, No. 35070, $TBA
Iraqi T-55 AL FAW/Enigma - Soviet made base from MiniArt, No. 37095, $TBA
SdKfz 234/2 Puma with full interior from MiniArt, No. 35414, $TBA
SdKfz 234/2 Puma without interior from MiniArt, No. 35419, $TBA
German 3-ton cargo truck 3,6-36S Pritsche-Normal type military service from MiniArt, No. 35442, $TBA
Wehrmacht Maultiers from ICM, No. DS3522, $137.

1/48 SCALE

Humber LRC Mk.2 from Special Hobby, No. 8065, $51.

1/72 SCALE

Semovente M41M da 90/53 Italian SPG from IBG Models, No. 72131, $30.
DAC Mk.I British Armoured Car from IBG Models, No. 72144, $24.99.
DAC Sawn off British Armored Car from IBG Models, No. 72146, $24.99.
Sturmgeschütz III Ausf G April 1943 Alkett Prod from MiniArt, No. 72105, $TBA

SHIPS

1/72 SCALE

Biber German midget submarine from Special Hobby, No. SN72006, $26.99.

1/350 SCALE

FFG Project 2250 from Takom, No. 6009, $66.95.
USS *Midway* CV-41 from Trumpeter, No. 05634, $314.99.

FIGURES

1/35 SCALE

US tank repair crew with Continental W-670 engine from MiniArt, No. 35461, $TBA.
US tank chassis repair crew from MiniArt, No. 35481, $TBA.
Panzer Crew 1943-1945 from MiniArt, No. 35465, $TBA.
Prayer before battle (You are important to God) from ICM, No. 35616, $34.99.
Danger! Mines! Ukraine, Summer 2022 from ICM, No. 35018, $89.99.

AUTOS

1/12 SCALE

Honda Dax 125 from Tamiya, No. 14142, $29.

1/24 SCALE

Mercedes-Benz 300 SL full-view from Tamiya, No. 24366, $49.
Mercedes-Benz 500 SLC from Italeri, No. 3633, $60.99.
Scania 770 S V8 White Cab from Italeri, No. 3965, $TBA
1977 Jeep CJ-7 from Revell, No. 14547, $24.99.
Aston Martin DB5 007 Goldfinger from Revell, EasyClick System, No. 14554, $39.99.

1/25 SCALE

'77 Dodge Warlock from MPC, No. MPC983M, $32.99.
1972 Corvette Convertible from AMT, No. AMT1437M, $32.99.
'64 Dodge 330 from AMT, No. AMT1366, $32.99.
Ford Mustang II 1963 concept car from AMT, No. AMT1369, $32.99.
1932 Ford Tudor sedan 2 'n 1 from Revell, No. 14553, $23.99.
Ford Bronco half cab from Revell, No. 14544, $34.99.
'71 Mach 1 Mustang 007 Diamonds are Forever from Revell, No. 14555, $22.99.
'64 Impala SS lowrider from Revell, No. 14557, $27.99.
'77 Chevy street pickup from Revell, No. 14552, $21.99.
'57 Ford Del Rio ranch wagon 2 n' 1 from Revell, No. 14548, $33.99.
1957 Chevrolet Bel Air from Revell, No. 14551, $34.99.

SPACECRAFT

1/72 SCALE

Atlas Agena from Horizon Models, No. 2006, $54.99.

AIRCRAFT DECALS

1/72 SCALE

US Airways Dark Blue 757 from Draw Decal, No. 757-58, $46 also available in: 1/200 $11, 1/144 $15.50, 1/400 $7.50, 1/500 $7.50.
Pan Am Delivery Colors 747SP from Draw Decal, No. 747-99, $55 also available in: 1/200 $13.50, 1/144 $19.50, 1/400 $7.50, 1/500 $7.50. 1/400 $5.50, 1/48 $11, 1/32 $17.50, 1/24 $33.

Modern kit
OLD SCHOOL MODELING

Scratchbuild details for the new Airfix 1/48 scale Buccaneer

BY RICARDO DACOBA

Introduced into Royal Navy service in 1962, the Blackburn Buccaneer attack aircraft served more than 30 years with British forces. But it had to wait until near retirement to see its baptism by fire with the Royal Air Force when Buccaneers were used to laser designate and bomb targets during Operation Granby, the British name for its involvement in the 1991 Gulf War. (South African Air Force Buccaneers carried out combat strikes in the decades-long Border War in what is now Namibia and Angola.)

When Airfix released its beautiful, all-new 1/48 scale kit of the Royal Navy Buccaneer S.2C/D, I wanted to build it as one the Operation Granby bombers. Kits-World provided markings (No. KW148148), but I scratchbuilt the details and modifications.

1

I planned to display the model with the starboard engine covers off, but they are molded in place. Using a fine scriber, I traced the engraved panel lines to deepen them until they were visible inside the part and then separated them using a fine-toothed saw.

2

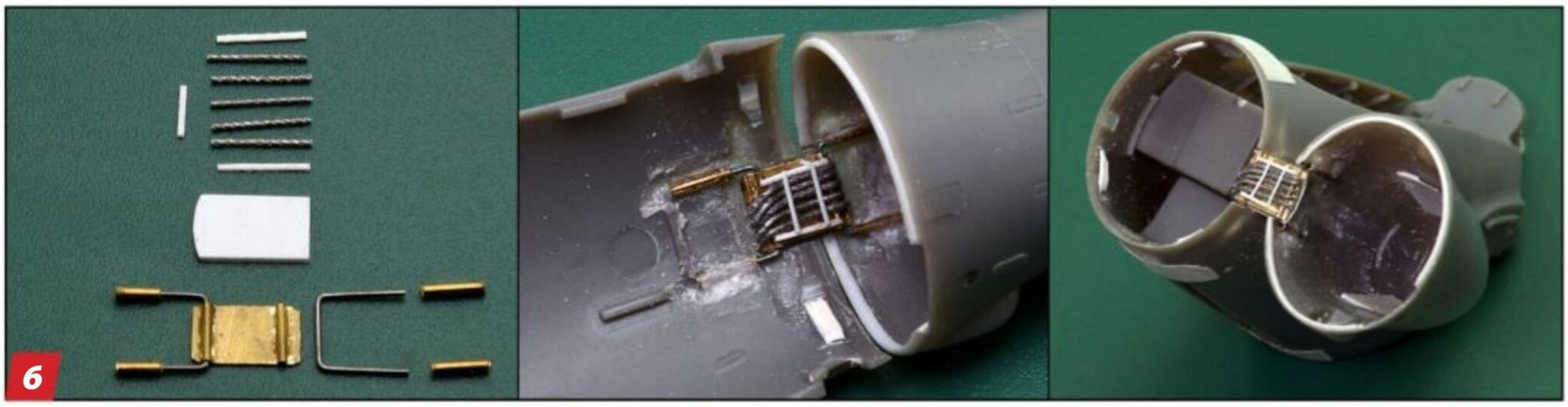
After cleaning up the edges of the opening, I taped the forward and center fuselage sections together with the cockpit tub and a forward bracket (Part B10). Based on references, I cut an opening in the wing fairing on the forward fuselage, drilled lightening holes, and backed it with sheet styrene marked with fine rivets. I removed portions of the internal parts to make room for the engine housing.

3

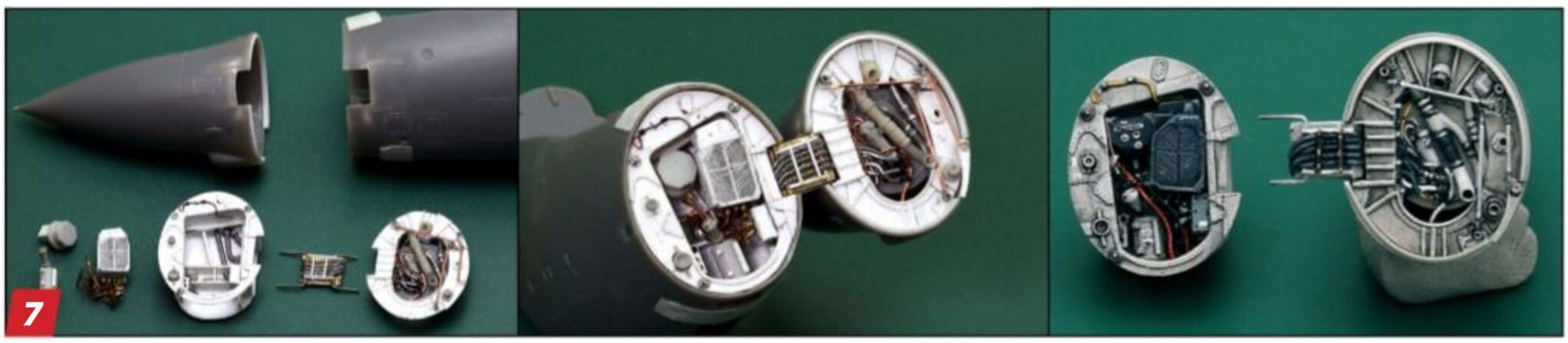
I formed the main part of the housing with two-part epoxy putty and adjusted its fit to the fuselage with epoxy adhesive, applying a little release agent to allow it to be easily removed for sanding. The housing was refined with a file before I drew on locations for engine supports.

Before adding styrene supports, I lined the housing with heavy aluminum foil that had rivets embossed from the back side with a pounce wheel before being glued in place.

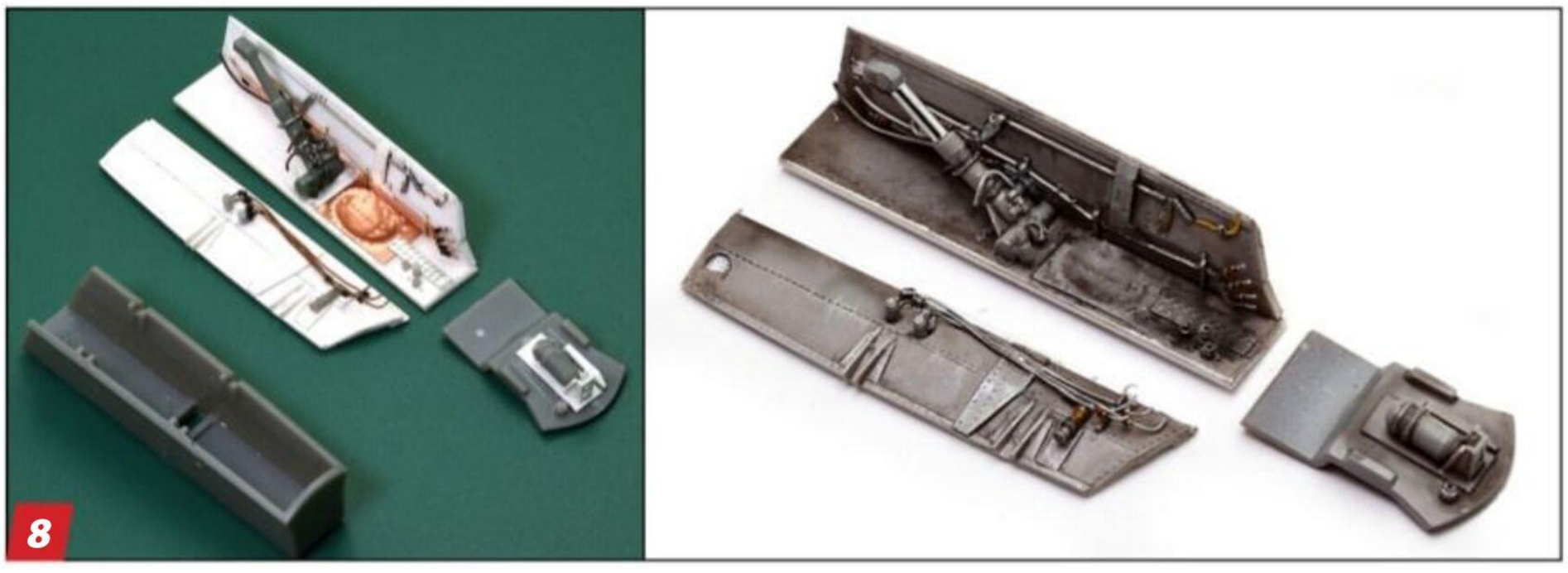
I like to maintain the lines of the plane but wanted to show some of its complexity, so I articulated the nose radome. Using a fine razor saw, I separated the nose cone along the molded panel lines and sanded the inner edges of the radome to be closer to scale-thin aircraft skin.



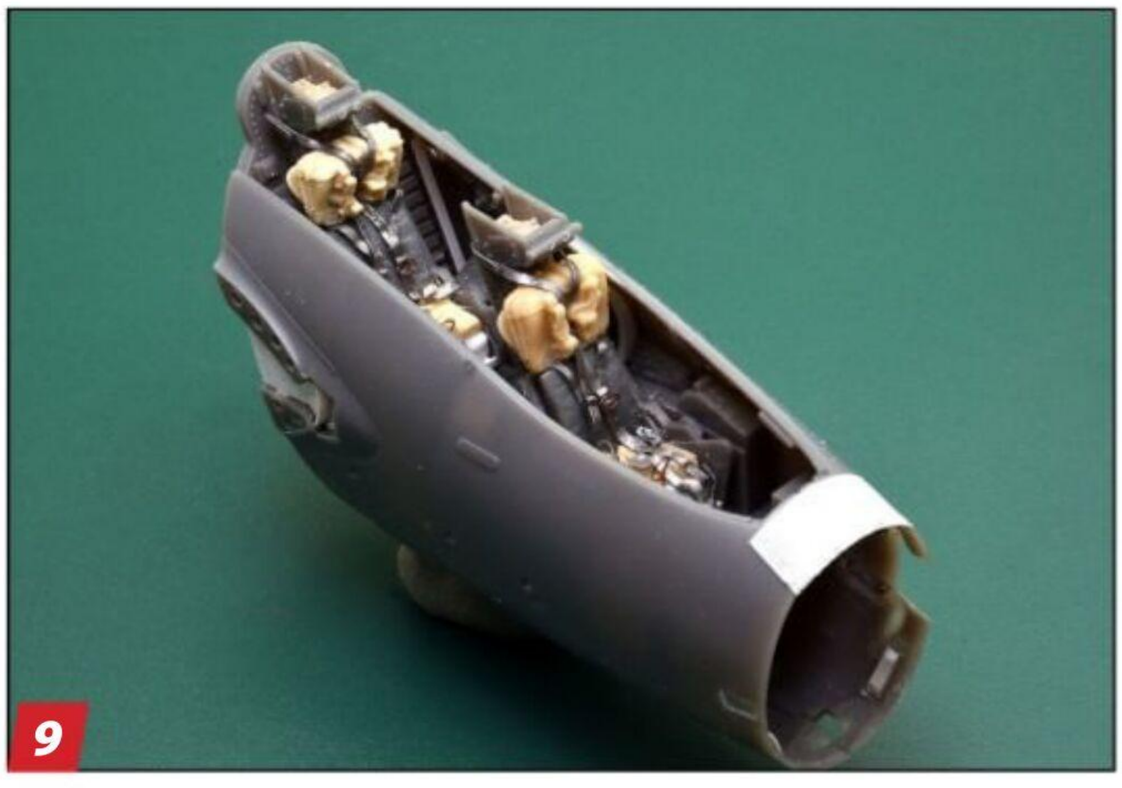
To make the hinge, I cut a new door from styrene sheet backed with thin brass shaped over steel wire. The ends of the wires slip into brass tubes that I attached to the fuselage and nose with a mix of superglue and talcum powder for rigidity. The other elements are solder wire hashed with a knife to look like braided cable and styrene strip for the wire keeper. I checked the hinge worked correctly before proceeding.



Using photos, I scratchbuilt the interiors for both sides of the opening using styrene strip and sheet for the basic structures, lead and copper wire for wiring, brass rod for the locking mechanism, and resin and plastic spare parts for other equipment. After testing the fit of the components into the airframe, I painted them with Humbrol Light Grey (No. 196) and picked out details by hand.



The kit's nose-wheel well was spartan, so I replaced most of the walls and ceiling with styrene sheet detailed with foil, resin fixtures, and fine wire. Adding the extension strut set the angle so I could tie it into the details, wiring, paint it light gray, and weather it with black washes.

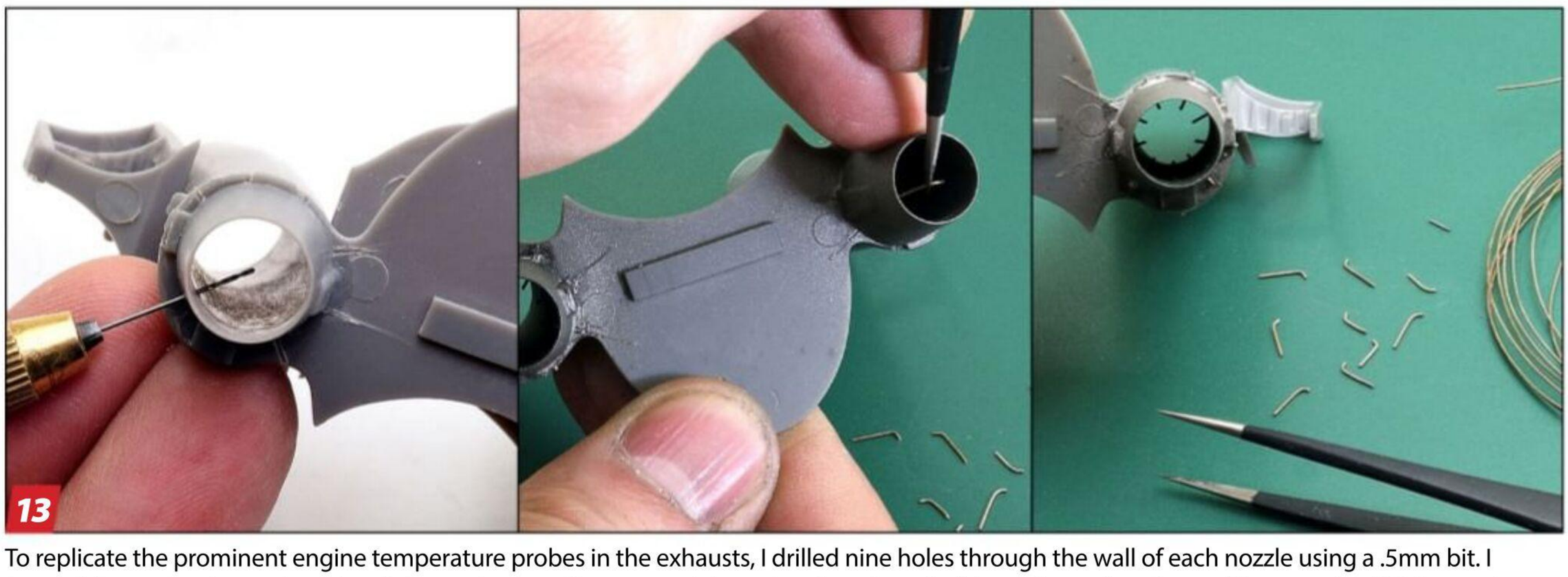


I modified the kit seats buy adding survival packs from resin Martin-Baker seats designed for an F-4 Phantom II and harnesses made from lead foil. Although the detailing of the seats was basic, paint can provide a nice touch of magic.

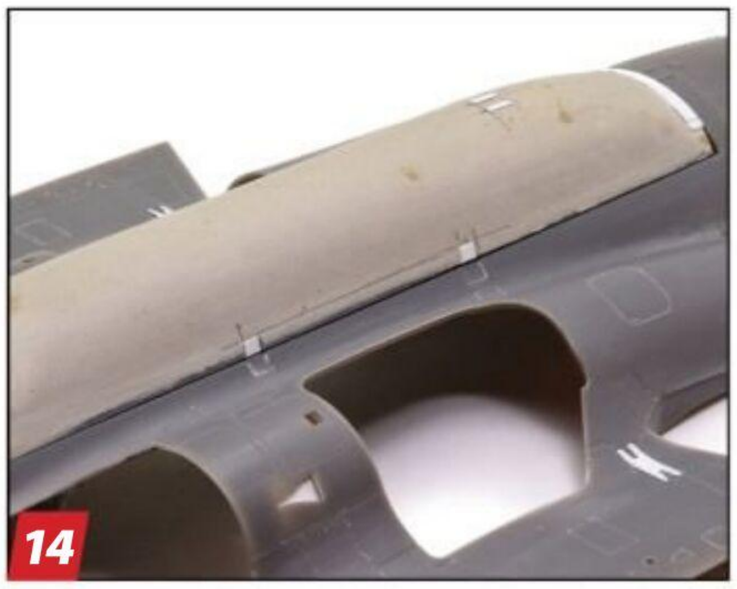
After airbrushing the cockpit tub and sides with Tamiya Neutral Grey (No. XF-53), I picked out the consoles with black. Dry-brushed light gray subtly emphasized highlights, and a dark gray wash deepened shadows. Using a finely pointed brush, I picked out details with silver, white, yellow, and red.

Before joining the fuselage sections, I needed to assemble the extensive engine ducting and exhausts. First, I thinned the overly thick lips of the exhaust nozzles and their separate fairings.

After gluing the multipart jet pipes, I applied putty to the internal joins and sanded everything smooth with sandpaper wrapped around a paintbrush handle to produce a seamless duct.

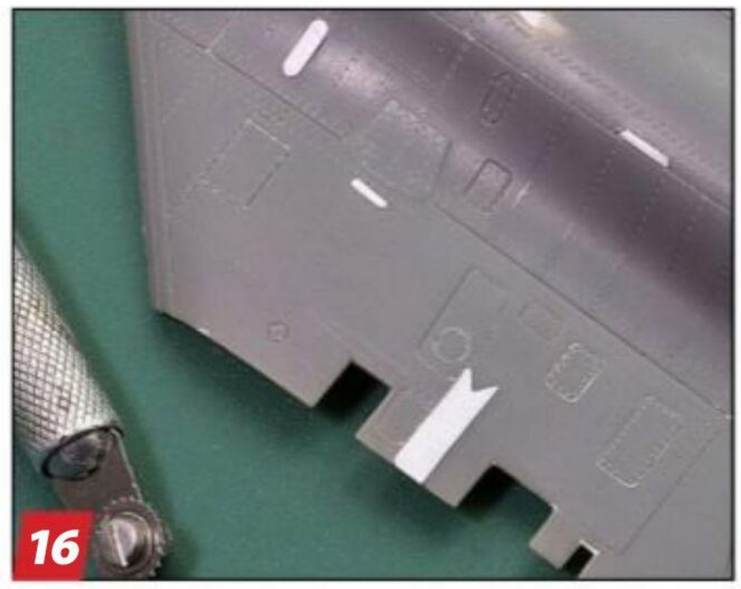


To replicate the prominent engine temperature probes in the exhausts, I drilled nine holes through the wall of each nozzle using a .5mm bit. I formed the probes by cutting bits of .4mm wire, bending one end, inserting them from inside, and securing them with superglue. While care is needed to ensure they align properly, the length of the wire is less critical, because they can be trimmed from outside after the glue dries.

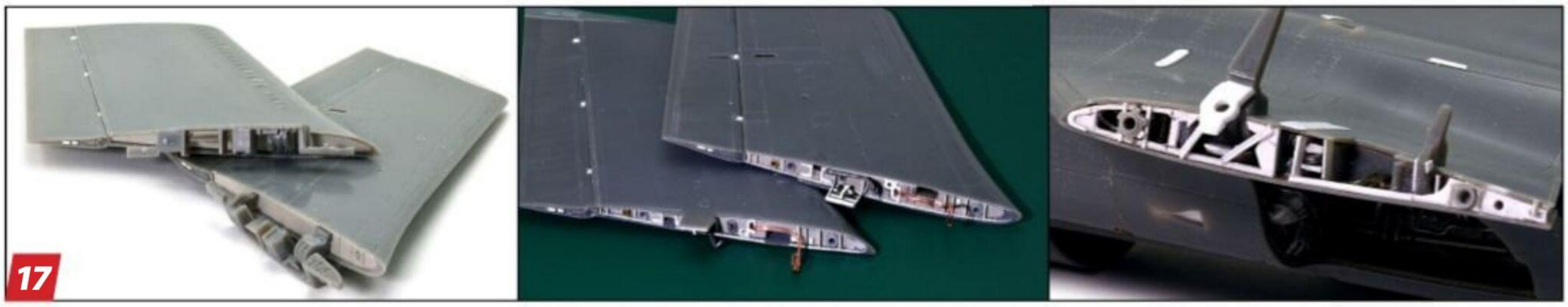


While Airfix's second kit of a Buccaneer in RAF service includes conformal bomb-bay door fuel tank, this one didn't. So, I built up the area with two-part epoxy putty and sanded it to shape before adding styrene-strip details.

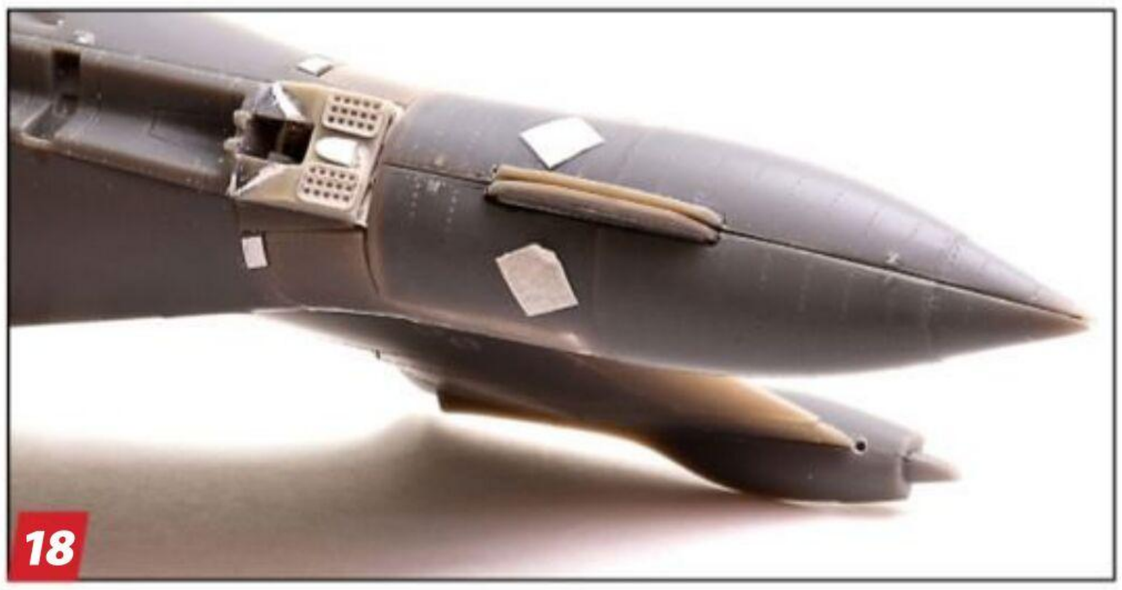
Disappointed by the shallow NACA intakes and other grilles and vents on the airframe, I deepened the openings with drill bits and knives and replaced molded vanes with thin brass sheet. Larger NACA intakes were backed with styrene sheet.



Comparing the surface detail with drawings and photos of Buccaneers, I added missing raised panels with thin styrene sheet, scribed new lines, filled others to replicate panel detail, and impressed omitted rivets where needed with a pounce wheel.



Wanting to pose the wings folded but desiring more detail in the exposed ends than provided by Airfix, I removed most of the molded equipment from the kit parts but left the support brackets. I replaced the eliminated structures and added more with styrene strip and sheet and copper wire. Keeping the molded supports meant I could remove the outer wings for painting.



When Buccaneers entered RAF service, the aircraft were fitted with chaff dispensers under the tail. I cut and sanded a block of excess resin to shape for the dispenser's body and modified two chaff panels left over from a Hasegawa 1/48 scale A-4M Skyhawk.

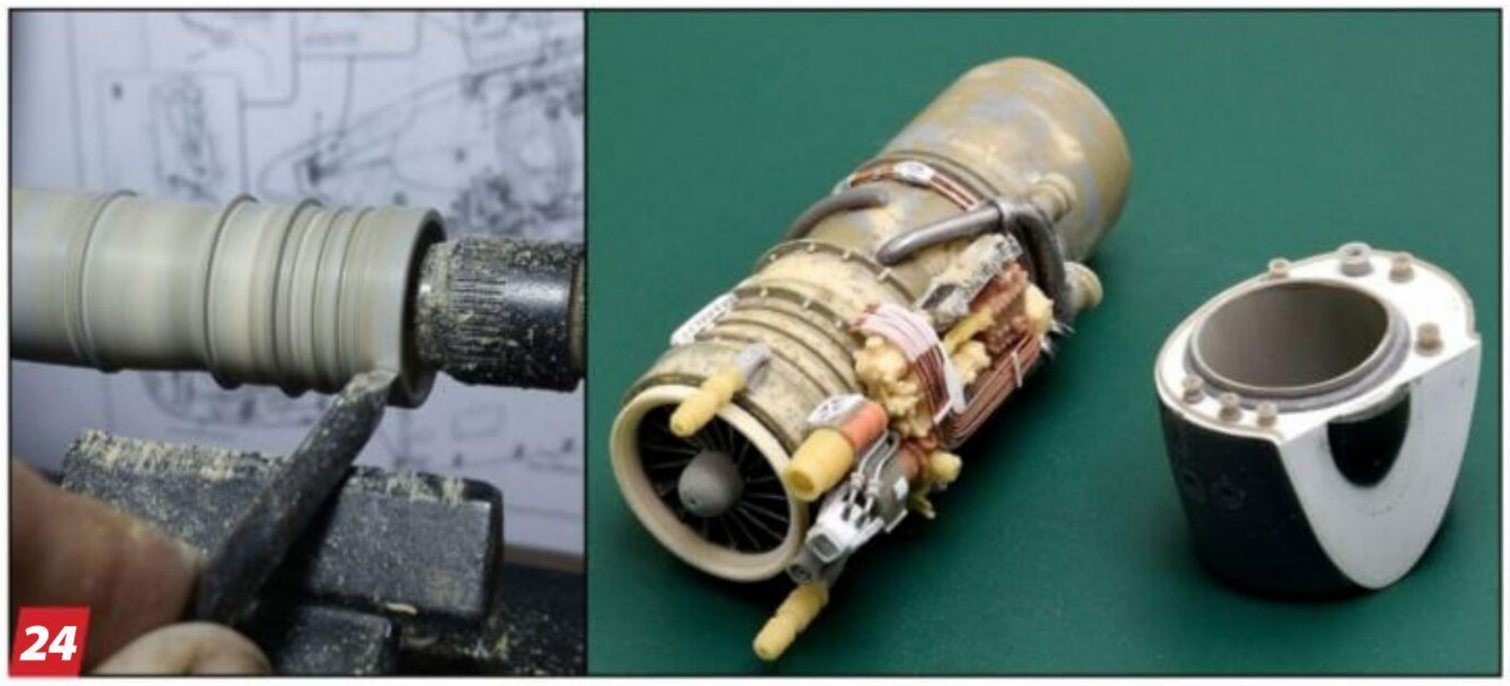
When closing the two halves of the central fuselage set, it is important to verify the correct centering of the engine nozzles before gluing.

It took careful positioning, filling, and sanding to blend the central and rear tail sections. I also corrected some panel lines and added reinforcing panels with thin styrene sheet.

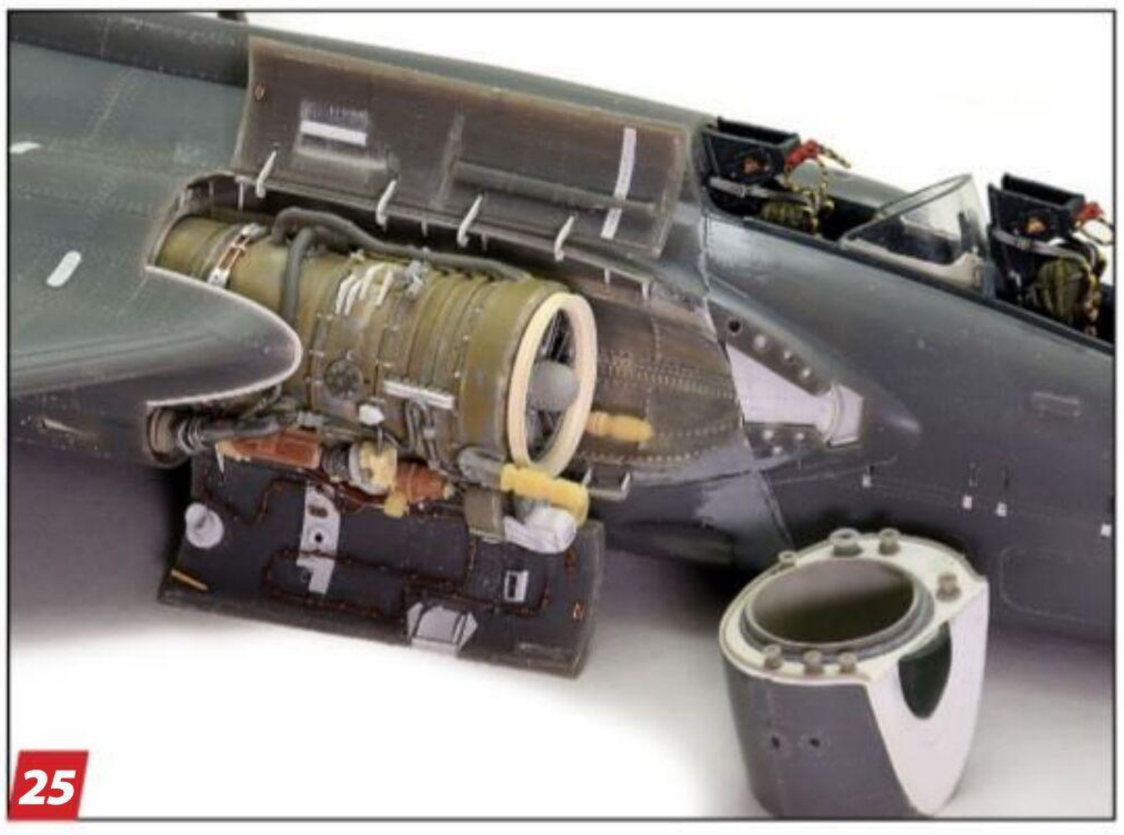
Ensuring the fit of the front and central fuselages was a bit more complicated, largely because of the modification made to the starboard engine. But it was nothing a little filler and sanding couldn't correct.

Since the ends of the flaps would be visible on the folded wings, I thinned the trailing edges and detailed the ends with styrene discs and strips.

The kit's front engine fans lack inlet guide vanes, so I added them with strips of thin aluminum sheet cut to length and twisted to shape. This tedious task required patience, but the results were worth it.

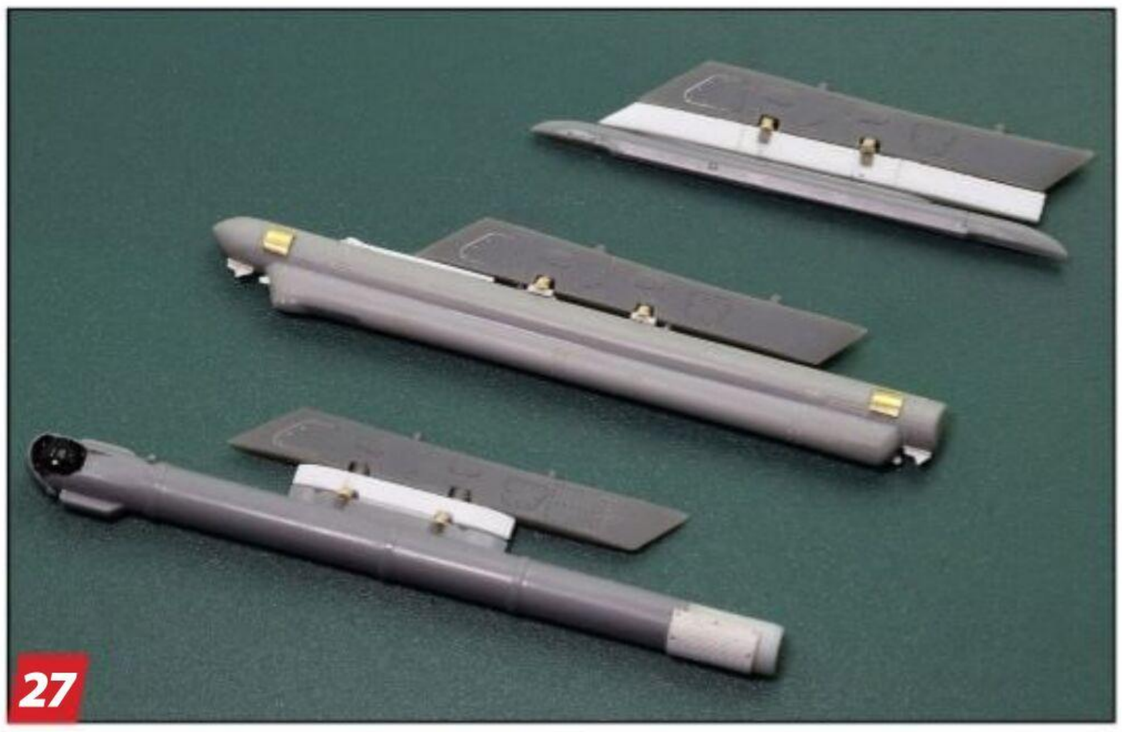


The kit supplies an engine designed for the portside. Rather than modify and detail that, I turned a resin cylinder on a lathe for the basic shape. It was then detailed with adapted spare parts and scratchbuilt components. The keys to making engines this way is to add one detail at a time and be prepared for many hours of work. I detailed the right intake fairing with styrene sheet and pipe couplings made by turning sprue on a rotary tool and carving it to shape.



After checking the fit of the engine in its bay, I thinned the engine hatches cut from the fuselage halves and detailed them with styrene sheet and copper wire. I also added styrene hinges and test-fitted them to the airframe.

Over a base coat of Tamiya Gloss Black (No. X-1), I airbrushed the engine and the intake rings with AK Interactive Xtreme Metal Chrome (No. AK477). Next, I applied thin layers of Mr. Color Super Metallic II Super Chrome (No. SM206), Humbrol US Ghost Grey (No. 127), White Satin (No. 130), and Matt Black (No. 33), and Tamiya Metallic Grey enamel (No. XF-56) to bring the Spey powerplant to life.

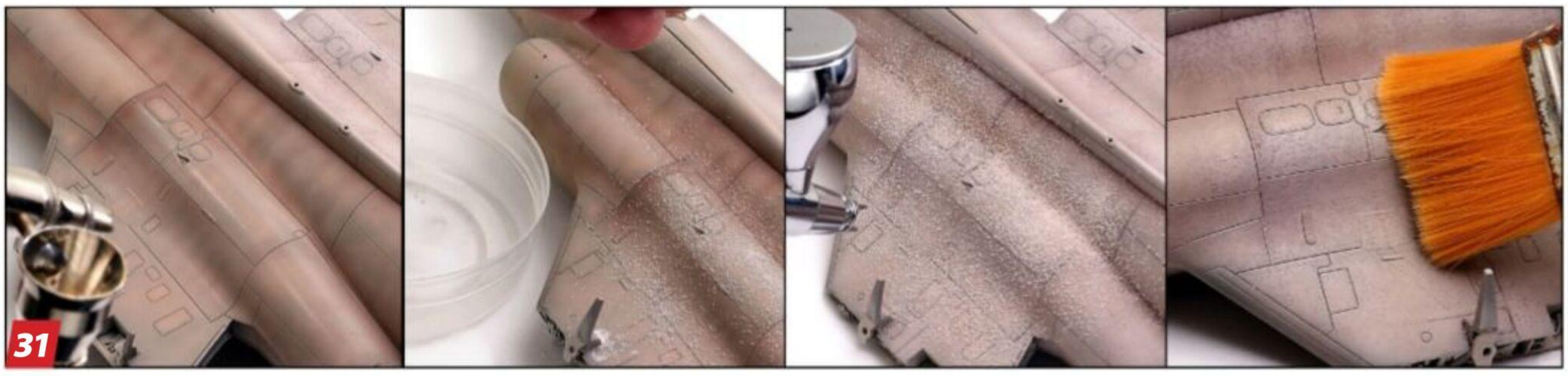


The Royal Navy version of the kit didn't include the AN/ASQ-23E Pave Spike or AN/AVQ-23E Targeting pods, so I sourced them from a Hasegawa armament set, and detailed and modified them to fit the Buccaneer kit pylons.

For Operation Granby, Blackburn Buccaneers were painted with Alkali Removable Temporary Finish (ARTF), better known as desert pink, over the existing gray and green camouflage. During use, the paint wore off revealing the underlying colors. I started with an overall layer of Tamiya Ocean Grey 2 (No. XF-82), followed by Dark Green 2 (No. XF-81). I protected these colors with a layer of acrylic clear gloss.

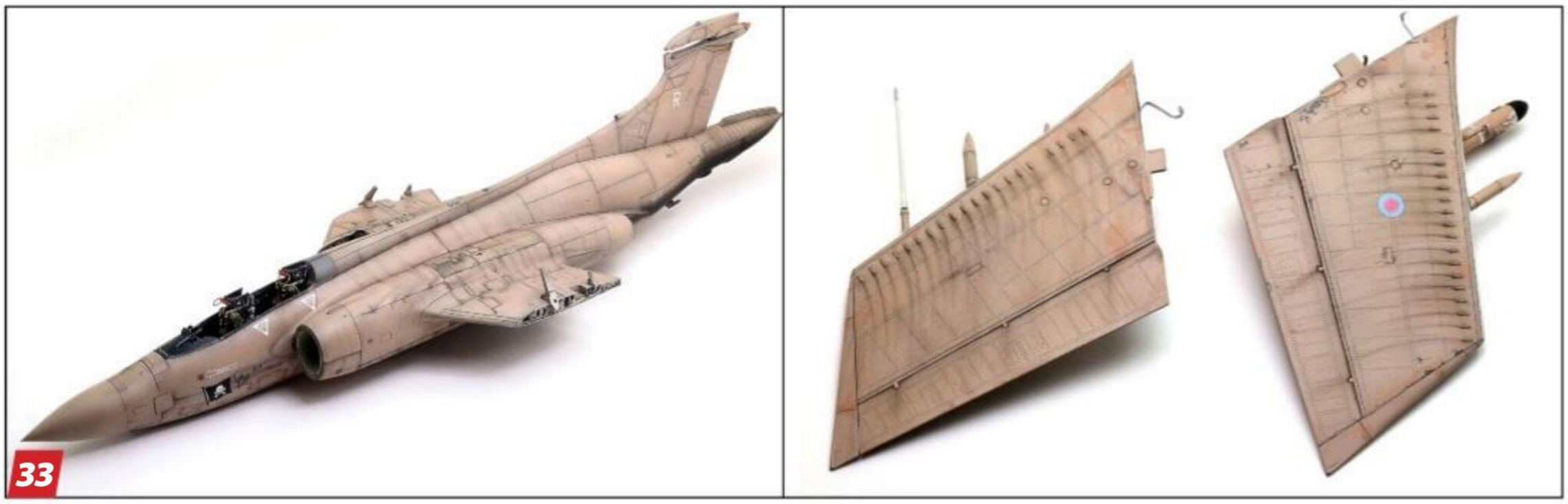
Using Vallejo Model Air US Desert Sand (No. 71.140), I gradually filled in each panel to produce different densities until, little by little, the base camouflage was covered. I checked references throughout because the removable paint suffered wear in some areas more than others.

I added a little Model Air RLM26 Dark Brown (No. 71.042) to the desert sand to post-shade panel lines and recesses. The brown darkens the sand without diminishing the warmth.

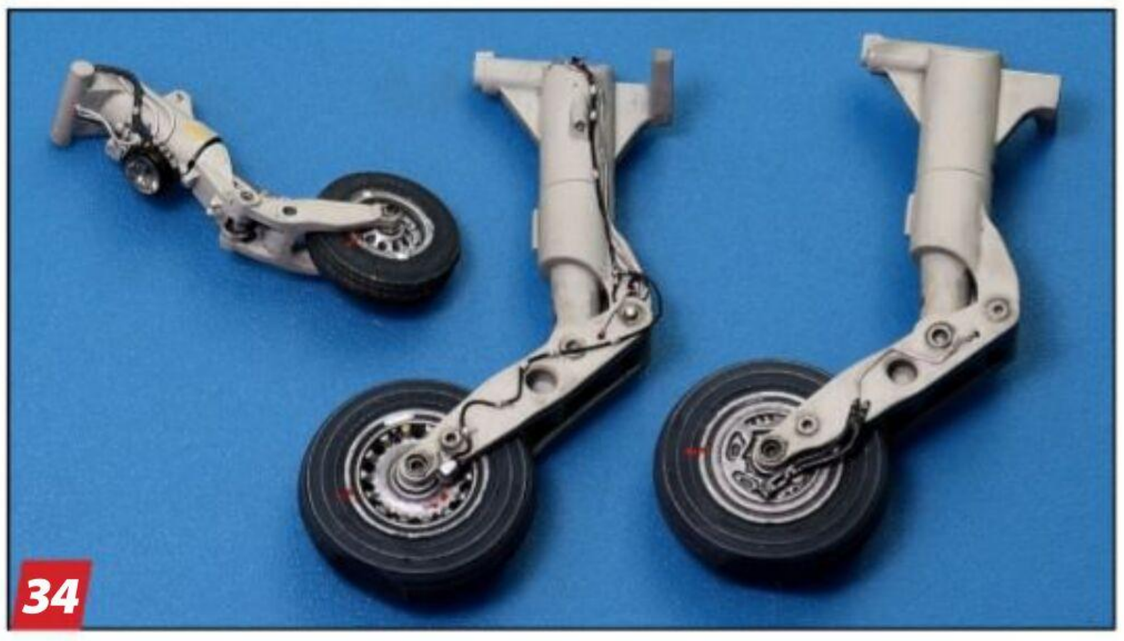


I used salt as a mask to further vary the surface appearance. Working a section at a time, I wet the surface with water in an airbrush and sprinkled on fine table salt. A hair dryer quickly dried the area and prevented the salt from dissolving. When the entire model was done, I airbrushed it with desert sand lightened with a little white to contrast with the base color. When the paint was dry, I removed the salt with a brush before cleaning the surface with clear water to remove any residue.

I applied a wash of burnt sienna and Payne's gray watercolors thinned with water and acrylic extender. After it dried, I removed excess with a soft cotton cloth, damp with water, pulled in the direction of airflow during flight.

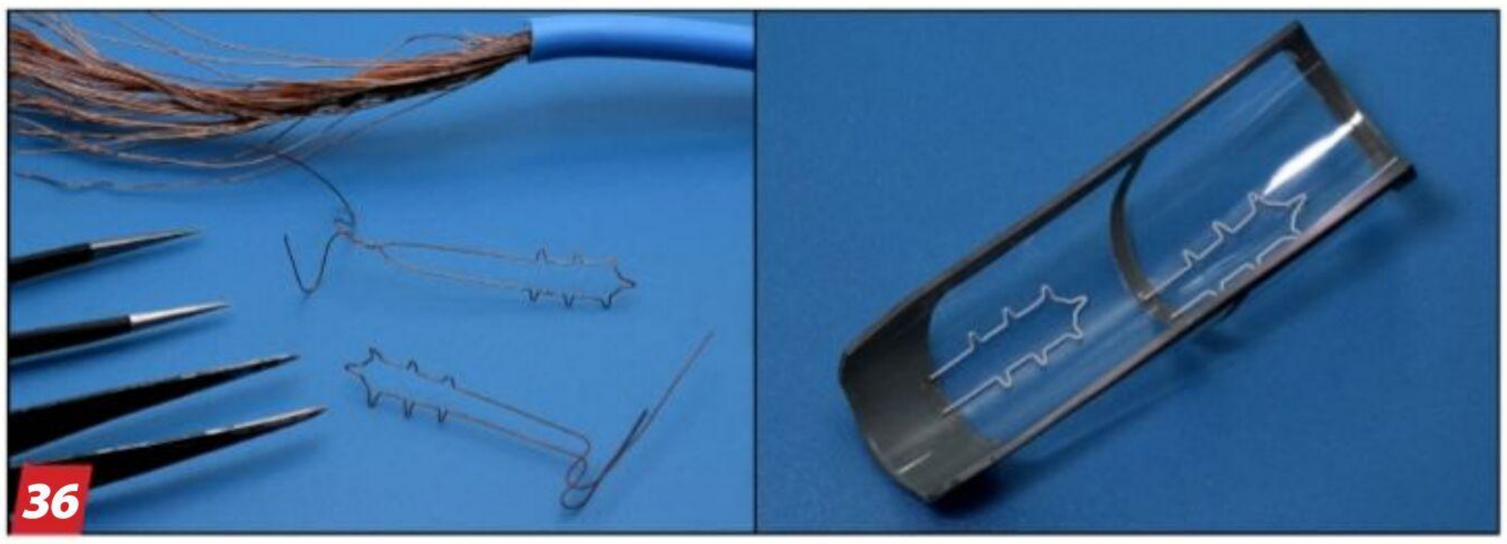


After applying the decals, I sprayed a thin layer of Vallejo Matt Varnish (No. 70.520) to seal the markings. The flat surface provided a good foundation for streaking added with oils and pencils behind hinges, vents, and vortex generators.



The kit's landing gear look great straight from the box. The only things I added were hydraulic and electrical lines made with copper wire and solder and routed according to references.

I carefully masked the engine firewall and housing, base-coated it with Tamiya Gloss Black (No. X-1) and airbrushed it with a variety of metallic and burnt metallic shades. After weathering, I finished detailing the area with ducting and braided hoses.



Rather than use the optional canopy with the molded canopy breaker det cord, I made my own by carefully shaping fine copper wire with two tweezers. These were painted light gray and attached inside the canopy without the molded canopy breakers with white glue.

I made the RAF-style Remove Before Flight tags by painting thin strips of aluminum foil with Tamiya White (No. X-2) and Humbrol Red Satin (No. 132).

The flat finish of the temporary desert camo quickly discolored with exhaust stains aft of the engines. I airbrushed thin black paint in a sweeping pattern from the jet pipes back to replicate this weathering.

FINAL THOUGHTS

AFTER INSTALLING THE SPEY ENGINE in its bay, I added wiring and piping and attached the kit-supplied boarding ladders, which gave the finished Buccaneer a nice burst of color. With that, I called the Desert Storm veteran done. It was fun to dress up this modern kit using old-fashioned scratchbuilding techniques. **FSM**

LEVEL UP your scale modeling

Don't leave your model half finished — make a base

BY ROBERT RAVER

Completing a model building or figure painting project elicits a great sense of accomplishment. Now that it's done, you can sit back, enjoy your victories, maybe think about how you might change your technique, put it on the shelf, and move on to the next project.

However, to my way of thinking, this is like tacking a painted canvas to the wall with no frame. A nice piece of work is diminished for lack of the simple finishing touch of putting it in a frame, or, in a model's case, putting it on a base.

Just a few of the many reasons for putting your next model on a base include ease of movement and transportation, reduce potential damage at shows, provide information and context for the model, and simply setting the stage for artistic expression. Your approach for a base can be simple or complex, depending entirely on tastes.

Let's delve a bit into concepts and what to consider when planning your base.

BASE BASICS

Anything that provides enough surface area and strength to support your project is fair game. Wooden plaques of various shapes and sizes have been used as bases forever. But consider other, more common items, like discarded containers lids, inexpensive picture frames, or even custom-made bases for you woodworking types.

After choosing your base, you may want groundwork. There are many materials you can use to obtain the initial texture.

Thin groundwork

Wood putties are a quick way to obtain basic groundwork texture and work well when applied directly to a wood base, which is exactly their purpose! I often turn to Elmer's Wood Filler and Durham's Water Putty. Mix the Durham's with water and it acts similarly to the Elmer's product.

Thick groundwork

Paper-based products used for papier mâché applications, like Amaco Sculptamold and Aves Clayshay are also useful. These products contain finely ground paper with an adhesive that becomes clay-like with the addition of water, spread easily, and dry hard.

Application specific

Companies like Acrylicos Vallejo, AK Interactive, and Ammo offer colored and textured acrylic mediums specifically designed to create groundwork. For example, here's Ammo Acrylic Asphalt for Dioramas (No. A.MIG-2107). These products can be a bit more expensive but provide quicker results.

Tools

To apply any of these groundwork products, I suggest you have a variety of tools at hand for spreading and contouring, including palette knives and silicon tipped brushes also sometimes called color shapers.

Working with groundwork products

I HAVE APPLIED A SMALL AMOUNT of each of these materials to pieces of wood to show their differences.

Wood Filler/Water Putty: These are great to apply directly to wood where they adhere well. Good for thin layers, they don't work well for building volume. The water putty can be made a bit smoother with a wet palette knife.

Sculptamold: This material is mixed with water and has more volume and texture than wood putty. I apply a coat of wood glue before Sculptamold to help it adhere to the base's surface.

Clayshay: Must be mixed with water and needs a glue undercoating. Works well for building up contours and surface height. Acts like clay.

Premixed medium: Applied out of the container, it provides an easy, one-step solution, adheres well, and, in this case, looks like a newly paved road.

GROUNDCOVER

After a texture is applied to a base, you'll want to make it look natural. Whether that's dirt and rocks, branches, trees, and leaves, or grass and weeds, you'll find many commercial options, but materials from around your home work well, too.

Dirt

One of the best materials to model dirt is, well, dirt. A shovel full can yield multiple sizes of material that range from powder to small rocks. Put the dirt in a box and let it dry completely (this may take a few weeks). Then sift it into different sizes and store in separate bags.

Trees trunks and branches

Fallen branches, twigs, and the roots of dead plants are perfect for replicating tree trunks, branches, bramble, and more on your model base. If using roots, pull them free of the soil and let them dry for a few weeks before use. I keep a variety of dead roots on hand for modeling.

Easy grass and leaves

For grass and leaves, I recommend self-adhesive tufts, like these from Green Stuff World and AK Interactive. Widely available from many companies for use in a variety of scales, they are one of the quickest ways to add groundcover to a base. They can be painted after application to suit your specific needs.

Static Grass

Alternatively, you can use Woodland Scenics Static Grass. The applicator drops the static grass onto your base with a slight electric charge, making it stand up like blades of grass. Without the applicator, Static Grass can make convincing pine needles in 1/35 scale. As with grass tufts, I often paint the static grass with an airbrush after it is applied for a more natural look.

Leaves

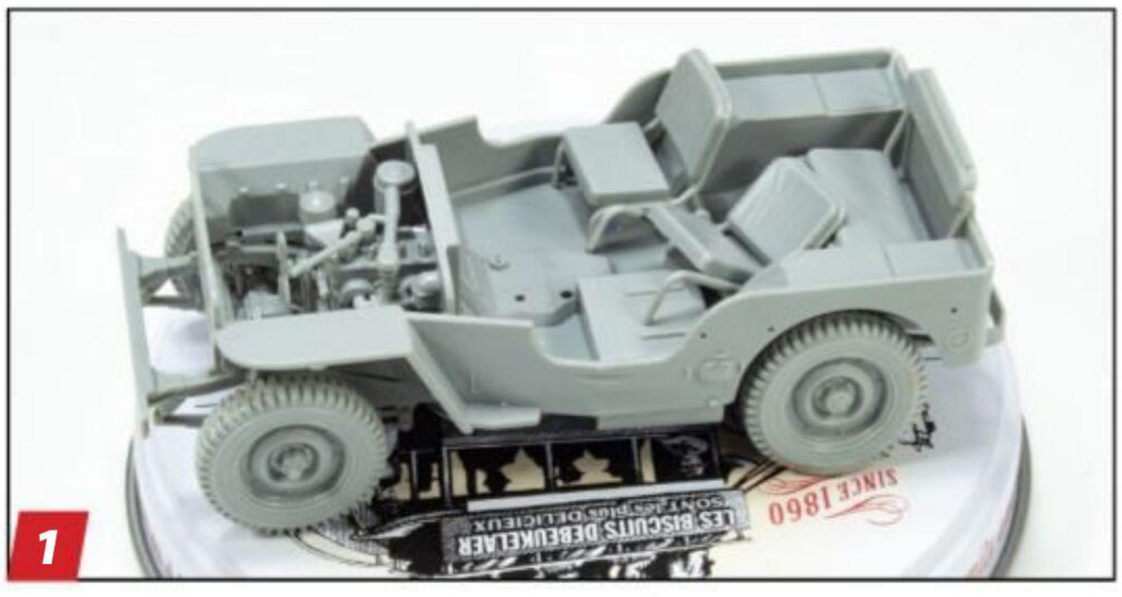
Products like Hudson & Allen Studios Forest Litter and Ivy are a great way to represent leaves, depending on the colors you're looking for. You can also punch your own leaves from paper or real leaves to get specific shapes, but that requires more work on your part.

Combining materials

Now, the fun starts when you combine all these assets. With a bit of work and imagination, you can produce a realistic scene that tells a story. Here, an M10 tank destroyer hides in the tall grass and brush waiting for the order to attack.

MAKE A SCENE

Now that we have covered some of the materials you can use to make a base, let's jump into a couple of how-to examples. First up, a simple base for a vehicle. In this case, I've chosen a 1/35 scale World War II jeep.



1

Remember, you can use almost anything for your base, as long as the model fits on it. The lid from a small cookie tin caught my eye as perfect for my jeep. I liked the shape, and it had just a little bit of room to add a few extra objects to complement the model.

2

I coated the lid with brown textured spray paint from the hardware store, put down a thin layer of wood glue, and then spread a layer of Clayshay with a palette knife. I used a color shaper to scribe brick pavers and a curb.

3

I covered the rest of the base with a little thinner layer of Clayshay, and, using the same approach as in the previous step, created a worn, cobblestone road surface.

4

I mixed a grayish brown color from craft paints for a base coat and let it dry before applying a thin mix of wood glue and water with an old paintbrush. While the glue was still wet, I sprinkled dirt on the road surface and rubbed it in with my finger.

5

I painted the groundwork with mixes of craft and Vallejo acrylics and AK Interactive Splatter Effects Stirred Earth (No. AK8030). In just a few steps, the base is done and ready for the jeep and other items to be placed on it.

ELEVATE YOUR MODEL

A quick way to add drama to your presentation is to give your base some height. Again, the first step is finding something that is a good fit for your model.

1

Remember, a base can come from just about anywhere, as long as it fits your model. A cube-shaped, airbrush box caught my eye as a possible starting point. I placed the main subject, a 1/35 scale M29 Weasel, on top to check the fit. Not bad.

2

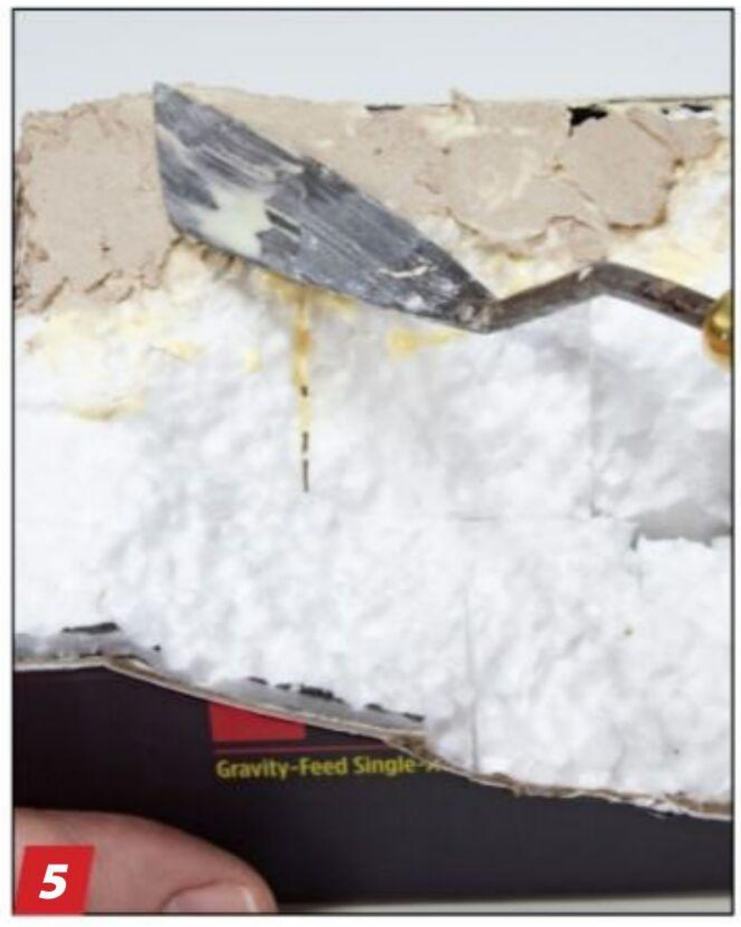
My plan was to trim the box to create a hill. To fill the interior space, I cut pieces of scrap expanded polystyrene (EPS) foam to fit inside the box. To glue EPS foam, use either white glue, wood glue, or foam-safe superglue. Regular superglue will melt the foam into a gooey mess.

3

Another test-fit of the M29 on the base with a resin tree placed for reference gave me a good idea of how the scene would look. Using foam as a filler material allows you to make easy adjustments to the shape of the base.

4

For the initial groundcover, I once again used Clayshay. As with the wooden base, the first step is to spread a coat of wood glue, applied with a palette knife, over the EPS foam. This seals the foam and gives the Clayshay a surface to adhere to.

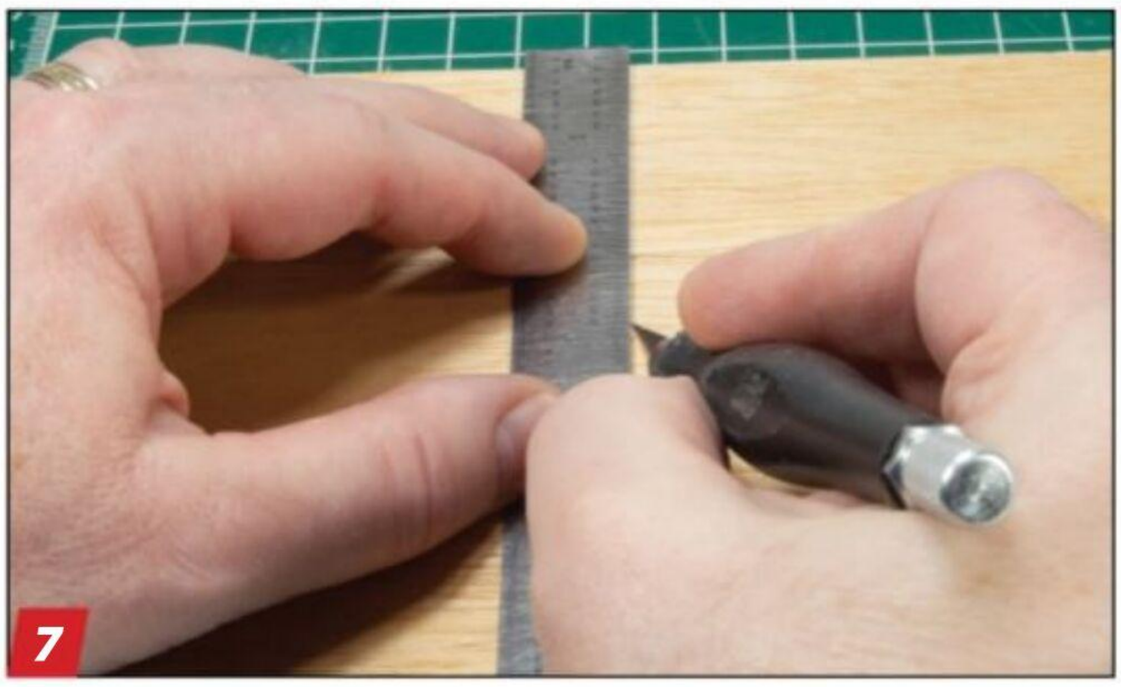


5

When the glue was dry, I applied the Clayshay over it, working in texture and contours as I went. While I'm using a palette knife in the photo, color brushes are helpful, too. So is sandpaper.

6

That's right, sandpaper. Clayshay dries with a hardness like soft wood, so it is easily sanded. I used a 220-grit sanding stick to clean up the edges.



7

To dress up the box, I cut sheets of 1/16-inch balsa wood to clad the sides. Each sheet was cut 1/16-inch longer than the base side to allow overlap at the corners and avoid gaps. I backed each balsa sheet with double-stick tape and attached them to the sides of the base.

8

I cut the wooden sides to match the groundwork profile as I went. The sides should be just slightly taller to make it easier to blend additional groundcover level with the wood by filling the extra space. Once all the sides were placed, I sanded the corners square.

9

Here is the base with the wood sides and ready for groundcover. The wood looks better than what I could have achieved painting the cardboard box and provides options for either paint or stain. A square of self-adhesive felt cut to fit the bottom protects the underside.

VISUAL INTEREST AND COMPOSITION

When creating a base for your work, you want something that will enhance the subject. Depending on what you envision for your model, the base may be simple or complex, but you must consider what you are trying to achieve. Yes, you want a better, more interesting display for your model, but what else does it do?

For instance, if your focus is just a single model or figure, simple may be the route you prefer with some groundwork or even an informational element. If you want to create a more dynamic display with multiple objects, then compositional elements like scene compression and elevation become more important.

Informational

An informational display keeps the focus on the model without spending much time on the base. On the left is a German halftrack on a base with limited groundwork and a label. On the right, a Panzer I engages in pre-World War II exercises. I liked the skull emblem used by the Death's Head unit, so I made a pennant with the emblem for the tank and a small label for the base with the emblem and identification.

Contextual

A contextual display reveals the subject in a relevant environment. On the left, the display shows the aftermath of a German mine-clearing vehicle having done its job. It tells something about the vehicle by creating a scene relative to its function. The piece on the right re-creates a scene from *Pirates of the Caribbean* in which Jack Sparrow walks onto a pier off the mast of a sinking ship. This puts Jack in his element and calls to mind the movie.

Elevated

Raising the base or the objects within the display can promote visual interest. Maybe it shows a vehicle at an angle or you use taller objects to frame the subject or create a backdrop. On the left, the church ruin serves as a backdrop, enclosing the figures and directing the viewer's gaze. On the right, the height and angles create drama as the crew desperately tries to exit its halftrack. Disparate heights and angles create interest in elevated displays. Note how a base might also affect how you finish a model and vice versa.

Compression

To me, the most fundamental aspect of a base is compression. What compression means is to fit everything directly related to your subject into the smallest possible space and removing anything extraneous that might cause confusion. On the left, do sandbags work? The goal was to edit the elements of this story into the smallest possible space. On the right, an even more extreme example of compression, literally cutting away anything not related to the focus of the story. The center section of the tank elevates the crew and the frozen environment provides context.

FINAL THOUGHTS

NO MATTER HOW YOU APPROACH your base, simple or complex, a base better presents your work. Creative use of materials provides limitless possibilities for approaches ranging from informational displays to true works of art. Let the materials, techniques, and concepts covered here help get you on your way to framing your creations in ways limited only by your imagination. **FSM**

DRAWING INSPIRATION

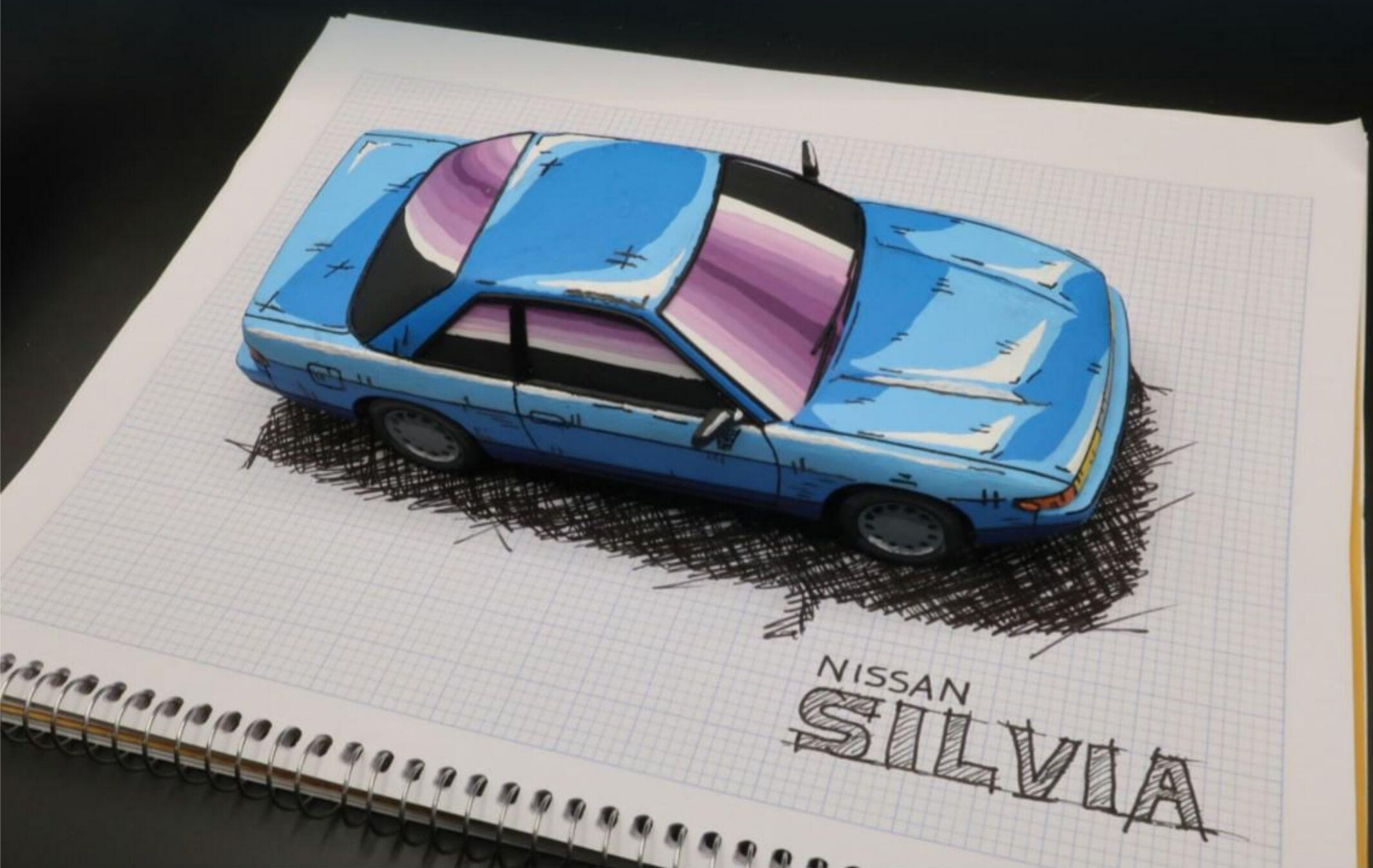
Model a scale auto that looks like it emerged from an anime cel

BY CHAD TRUSS

When I build scale models, I like to try something new with each project. That may mean attempting a new technique, using a tool in a way I haven't in the past, or tackling a building or finishing task that I've never tried before. This helps me improve, but more importantly, it gets me thinking outside the box and making things that people don't often see, like a model car that looks like an anime cel illustration.

For those unfamiliar, anime refers to Japanese-style animation. I was inspired by the *Initial D* series of shows and movies that centered on car culture, racing, and drifting. I took my painting cues from the animation's cel-shading style.

For me, a build like this is fun, simple, and if you find the right kit, inexpensive. A curbside of a Japanese Domestic Market (JDM) car works best. I prefer Tamiya kits, but Aoshima, Fujimi, and Hasegawa kits would be well suited for this type of build, too. I picked up a Tamiya 1/24 scale Nissan Silvia S13 (No. 24078) for $18. A little hunting, and you'll be able to find an inexpensive JDM car kit for your very own anime build.



One of the stranger things about a build like this the windows will be painted. That means you can add all the interior parts — tub, seats, dash, steering wheel, and whatever else — directly to your spares box. It's a weird feeling to leave all that out, and it won't be the last.

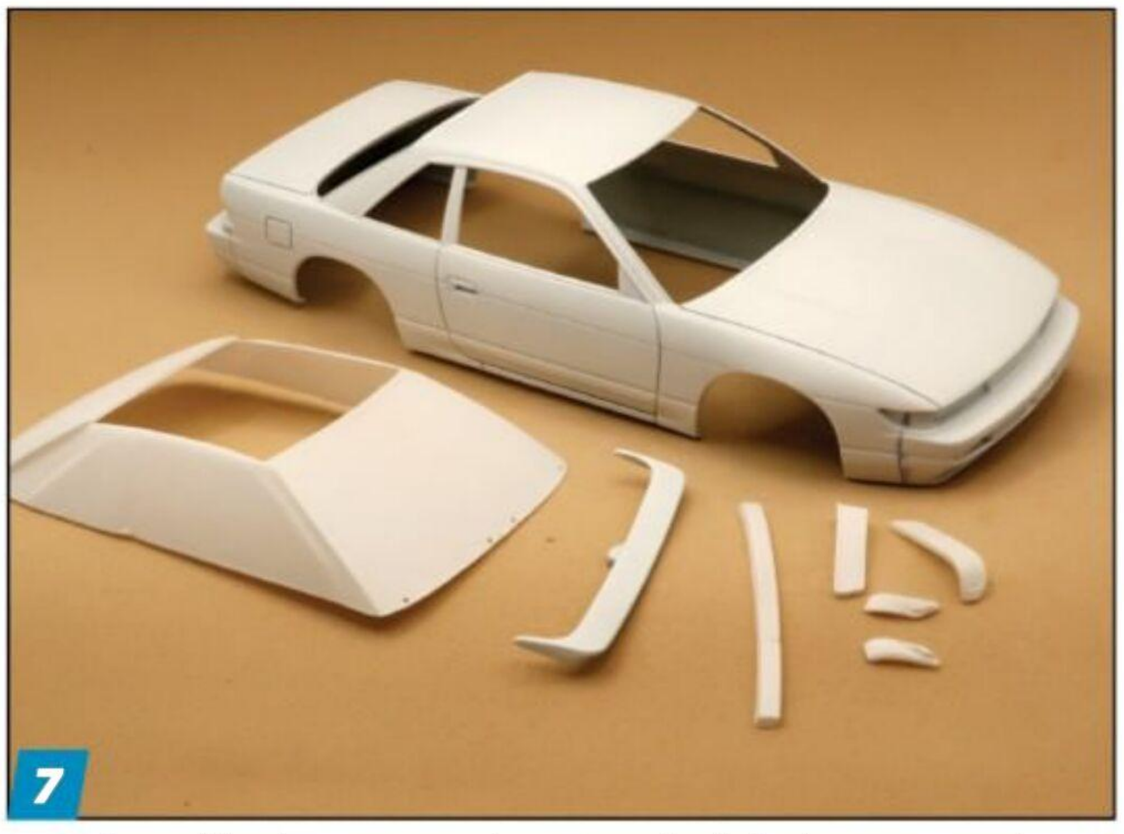
For the body, I like to highlight mold lines with a permanent marker so I can see when I have completely removed them. Medium-grit sanding sticks and Tamiya 400-grit sanding sponges do the job for me.

Remember, the windows will be painted. To give the paint something to stick to, I also sand the clear plastic for the windows, headlights, and taillights with a 400-grit Tamiya sanding sponge.

Viewers rarely see the undersides of cars in anime, and when they are, the animation isn't exactly precise. To promote that style, the chassis and suspension don't have to be exact, but it's nice to hint at detail. So, primer the chassis and suspension parts black.

Any parts that would be natural metal or aluminum, like brake rotors, exhaust, tie rods, shocks and struts, and rear axle, paint them with gray primer. No reason to get out your airbrush for the chassis or these parts. Shoot straight from the can; I prefer Mr. Finishing Surfacer 1500.

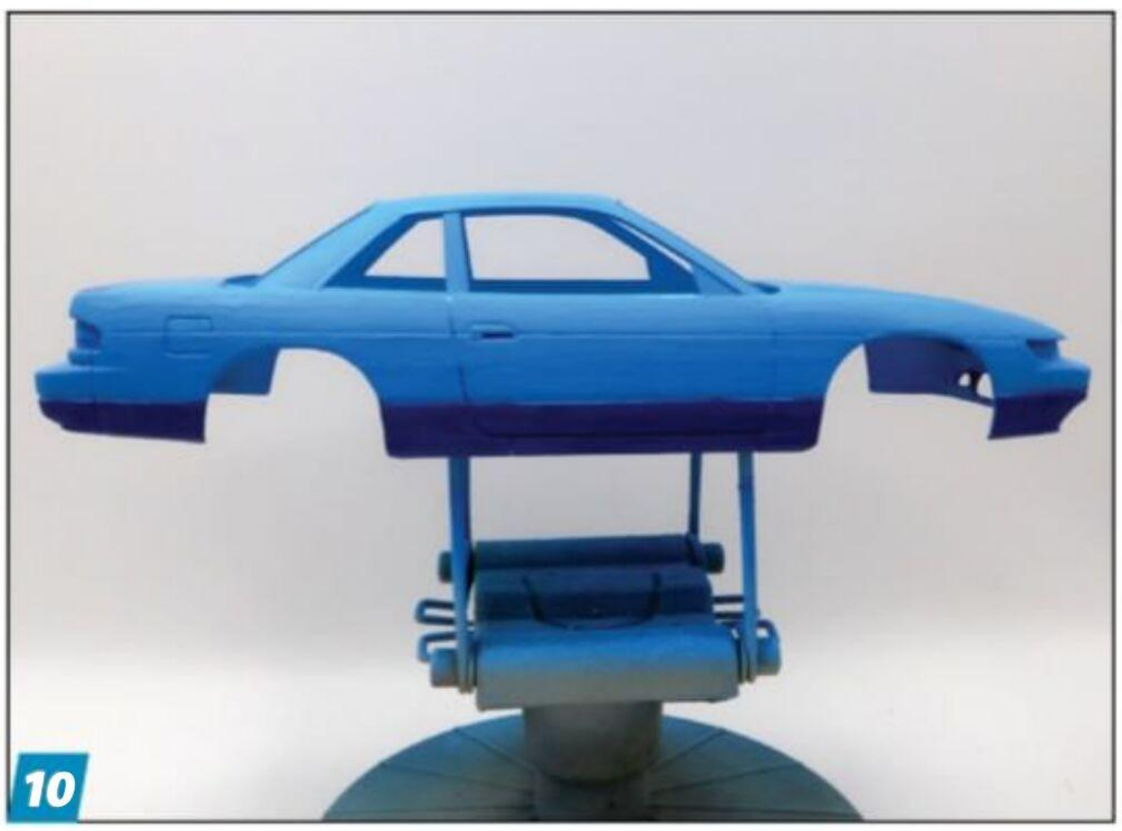
When the primer is dry, glue your suspension and underside together. Keep your instructions handy in case you forget where something should go, but otherwise, don't worry that you might build components out of order. I told you things might feel a little weird.



Now, the real fun begins! To make a 3D car body look 2D, we start by priming all of the exterior parts (not including the chassis) white. Again, I turn to Mr. Finishing Surfacer 1500. Yes, this includes the windows and other clear parts.

To re-create an anime-style color scheme, you'll want three shades (dark, midtone, and light) of similar value, white, and an almost-black. I wanted a blue Silvia, so I chose Vallejo Blue (No. 70.925), Andrea Blue (No. 70.841), Sky Blue (No. 70.961), and Cold White (No. 70.919).

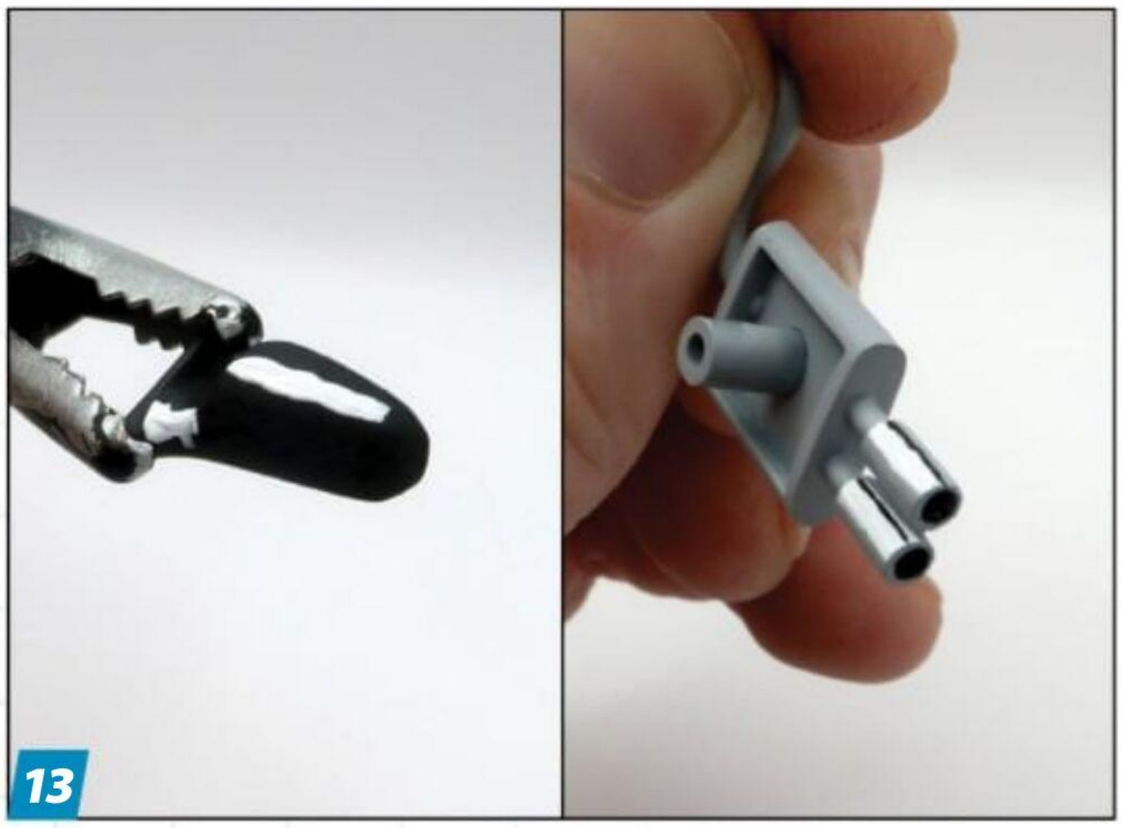
For a hand-drawn feel, most of the paint will be applied with brushes. But to start things out, take your midtone color, Andrea Blue in this case, and apply it with an airbrush. No airbrush, no worries. Jump right to applying your first color with a paintbrush.



Now, it's time for shadows and highlights. Concentrate your dark color, Blue for this Nissan, on the lower portion of the car body along the lower part of the doors and rocker panels and underneath the bumpers. If you think you've gone too high, touch up with your midtone.

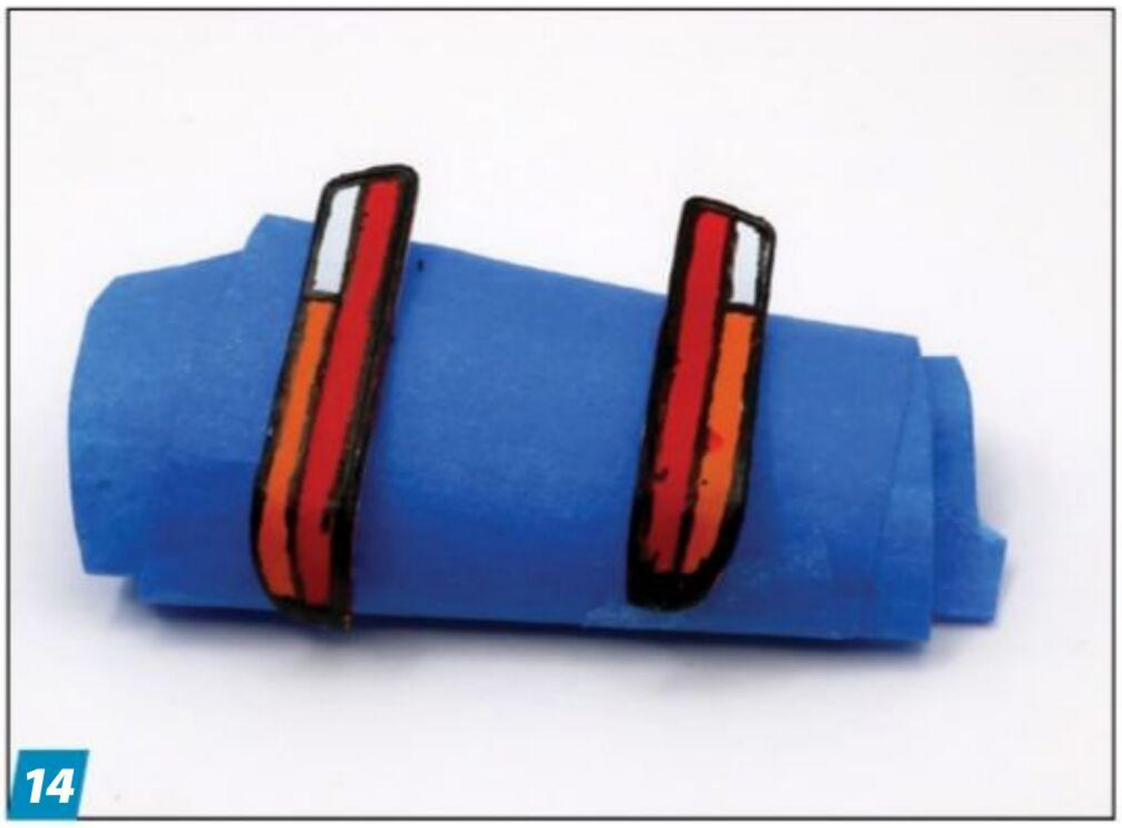
It isn't always obvious where the lighter shade should go. It took me three attempts to get the hood to look like I wanted it to. Hold the body under a light, turn it and tilt it, and note how light fades across the roof and hood, and don't be afraid to make a mistake!

For highlights, break out your white paint and apply it to the upper portion of the fenders, doors, and quarter panels. Add some highlights to the corners of the roof and hood. And again, experiment. You can always refine the highlight size and shape with the light body color.



13

After you have applied the highlights, check your work. Do any of the colors need adjustments? While considering it, handle odds and ends. I painted the door mirrors Vallejo German Grey (No. 70.995) with a white highlight. A black line and white highlight simulate chrome exhausts.



14

Vallejo Deep Yellow (No. 70.915) works well for anime headlights, and Scarlet (No. 70.815) does the job for the brake lights. I mixed the two colors for the amber marker lights and left the backup lights the white primer applied at the outset. Use black marker for the light buckets.

15

With a small brush, add a white highlight to the bottom of the wheel where the light would hit it. For me, I mixed a gray slightly darker than the wheel for the upper portion. I used the same gray to highlight the top of the tire and the tire just under the wheel highlight.

16

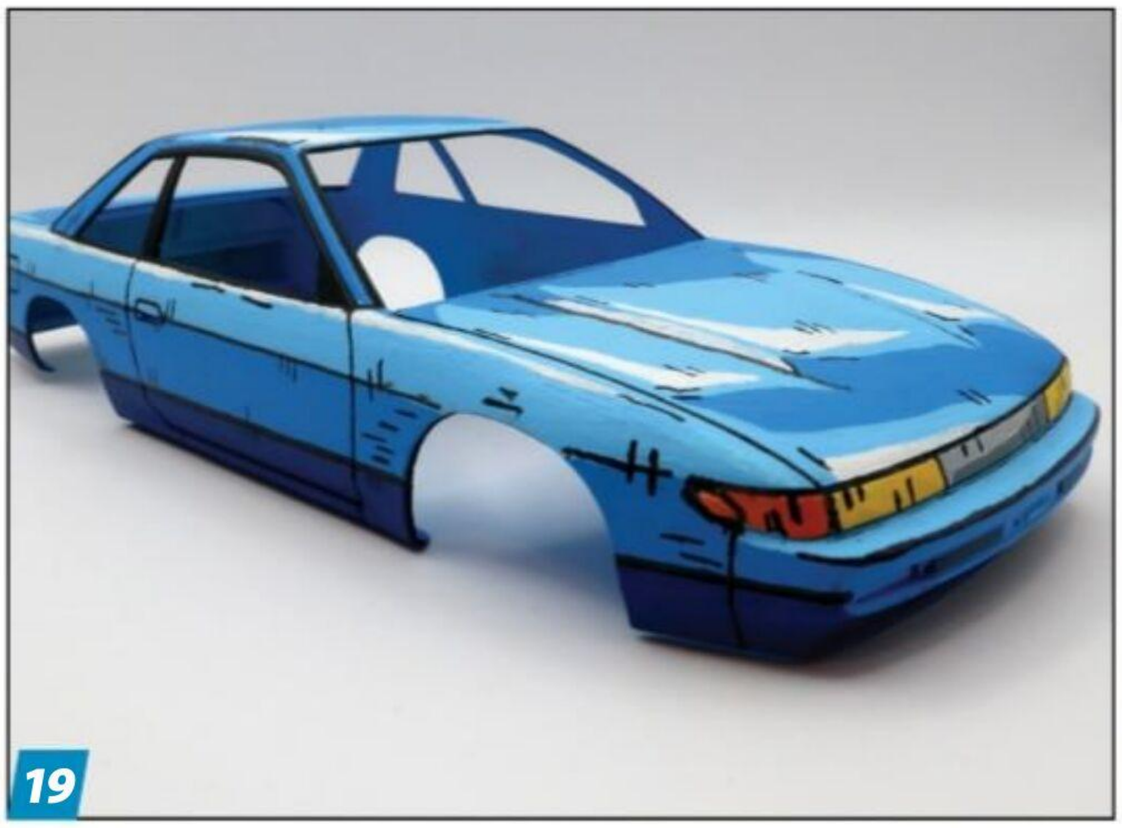
Taking inspiration from model-kit box art, I painted the dark portions of the windows Vallejo German Grey. For the rest, you want to suggest glass, so you have some wiggle room. Blue would work, but because the Silvia was already blue, I went with Vallejo Purple (No. 70.959).

17

You want to give the impression of reflectivity and how light plays on glass. Start by mixing a range of tints from light purple to purple out of the bottle. On the windshield, leave a gap of white along the German Grey and the opposite A-pillar and paint a stripe of your lightest purple from top to bottom. Then work with darker shades until reaching a single stripe of purple in the center. Mimic the pattern on the rear window — because of the curvature, I went with a semicircle pattern. For the side windows, I worked from light at the bottom to dark at the top.

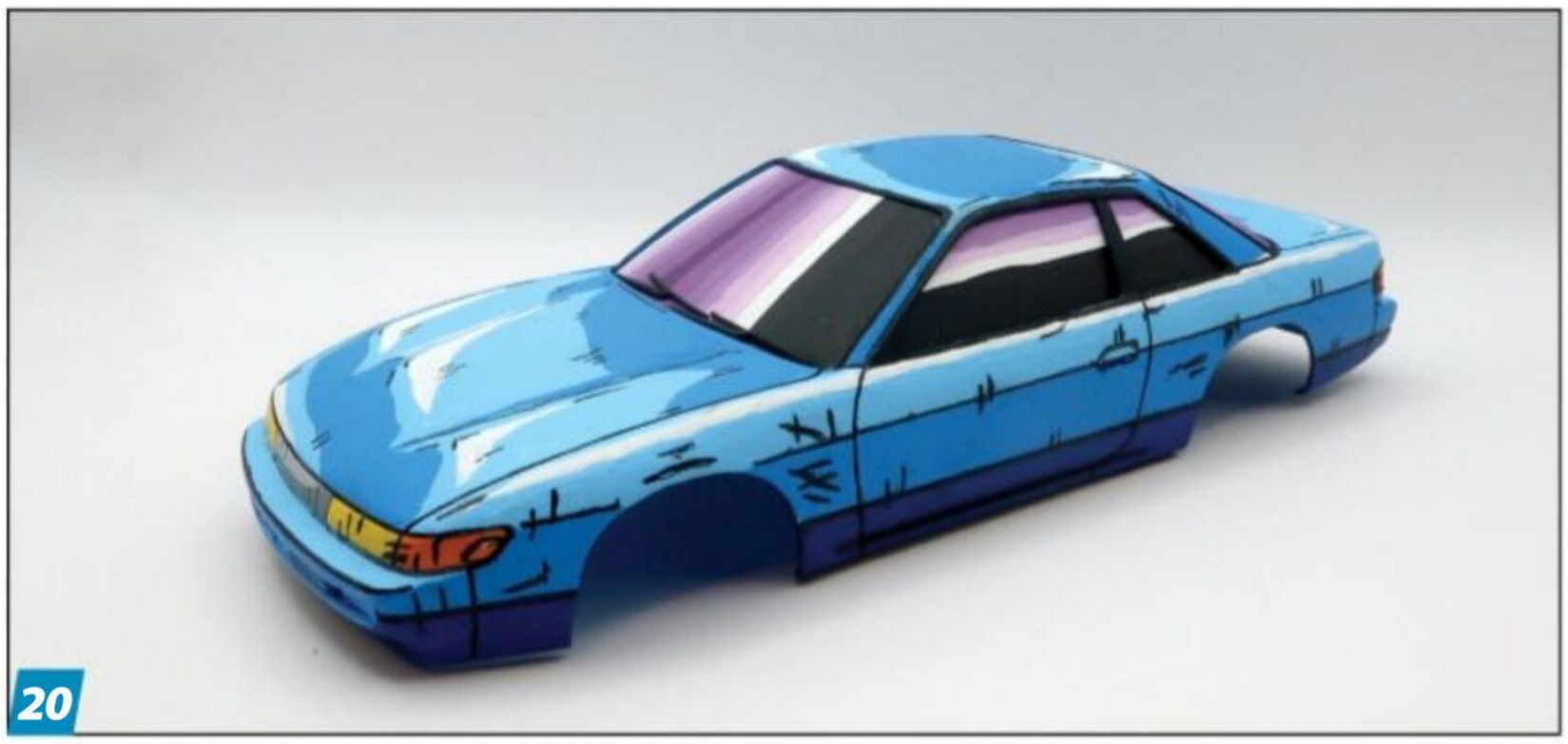
18

When the paint has dried, use a fine-tipped permanent marker (I prefer Pigma Micron 05 and 08 artist pens) to pick out all the panel lines: doors, fenders, bumper seams, window trim, handles, style lines — everything. Be careful not to smear the ink as you work.



19

To add a little anime flare, you'll want to add "speed lines." Take an artist pen (I like a Micron 08) and randomly add little marks. Some should cross body lines and changes in paint shades; others should partially follow highlights. Put a few small ones in each of the light lenses.

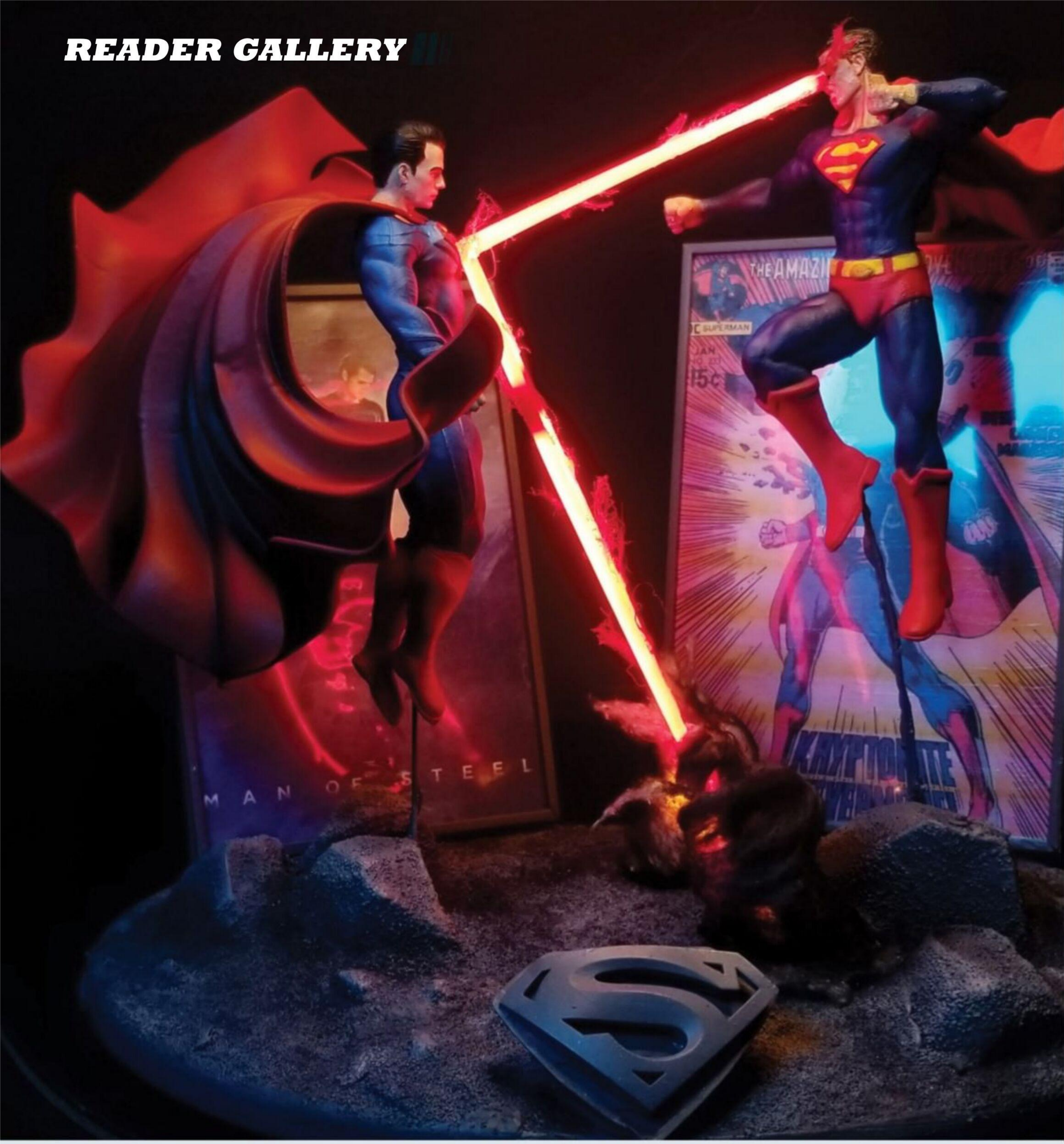


20

At this point, spray the body with clear flat — I used matte Mr. Super Clear (No. B-514)from the spray can. After your paint work is protected, slide your windows into the body and glue them in place. No need to worry about fogging, so use superglue for a quick stick.

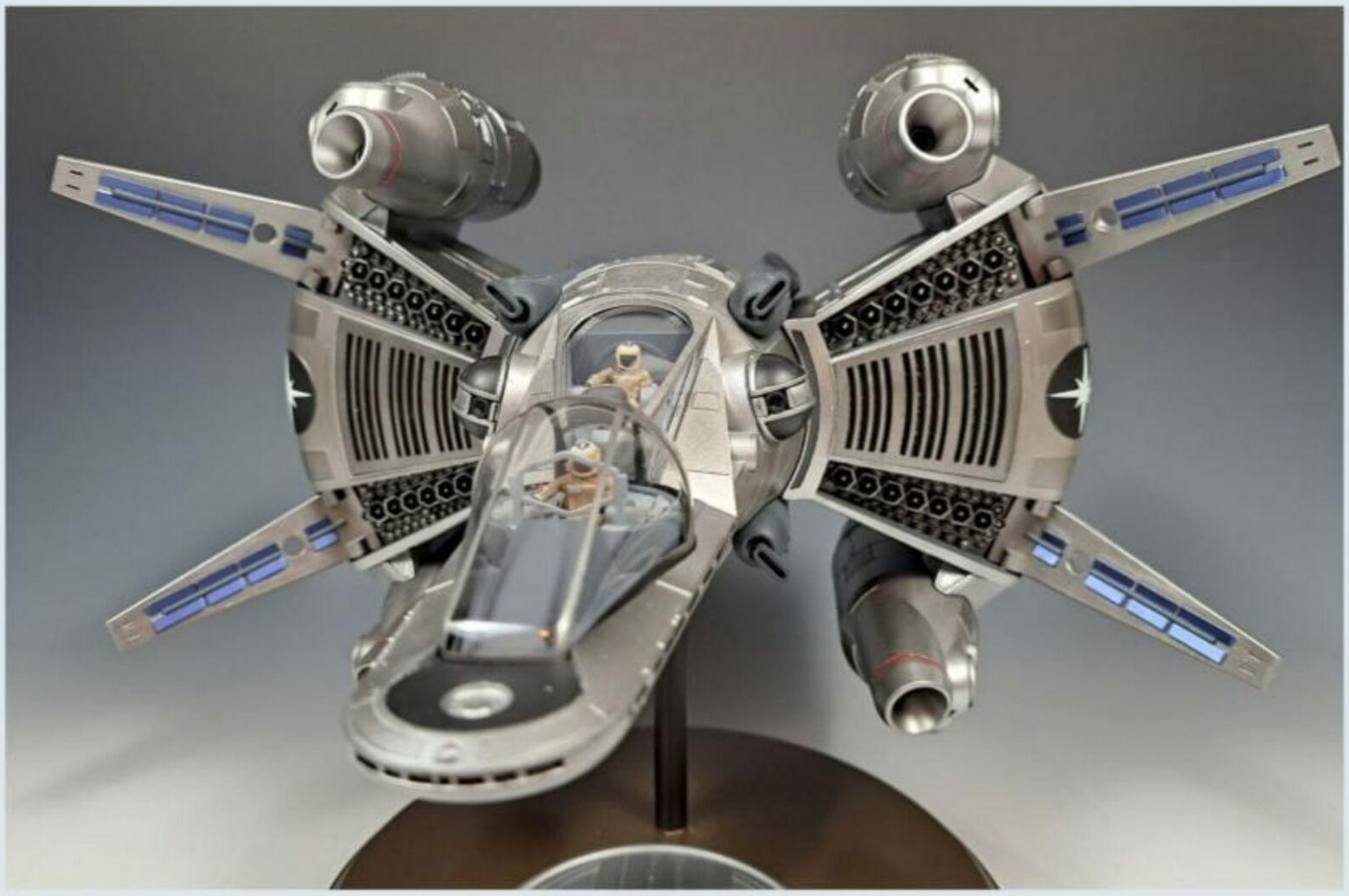
FINAL THOUGHTS

LASTLY, put your body on the chassis and call it done! Is this style of build and finish for everyone? Nope. But for those who want to experiment and do something completely different, it can be liberating. From my perspective, it can't hurt to try something different. Who know? You might start a anime-shading trend! **FSM**



▲ ANDRE RUPERT
YPSILANTI, MICHIGAN

This cool scene came out of Andre's love for Superman and all things geeky. He wanted Superman opposing something imposing, so his daughter suggested Andre create a "Superman vs. Superman" vignette. He 3D-printed the Supermen (Supermans?) and decided to put a comic-versus-movie spin on it. Andre modeled the terrain, painted the model using Vallejo Game Air paints, and wired the Heat Vision for the final touch. He says the full build took about two weeks.



▲ DOUGLAS CORP
CHARLES TOWN, WEST VIRGINIA
Douglas 3D-printed 1/48 scale *Gunstar 1* from the 1984 movie *The Last Starfighter* from Gambody. He created custom 3D-printed parts, like maneuvering engine nozzles, rocket launchers, clear cockpit instruments, and vacuum-formed clear canopies using Gambody files as the masters. Douglas scanned Toy Weaver action figures, re-posed them to fit in the cockpit, and added custom lighting for the cockpit, navigation lights, gun turrets, rail guns, and engines. He painted the model with Vallejo Metal Color acrylics.

▼ JEFF EVERTON
NEWPORT NEWS, VIRGINIA
For his first time kitbashing, Jeff chose a Revell 1/25 scale Chevy SSR with an AMT 1/25 scale Chevy 1966 Nova pro street. He used Tamiya Candy Lime Green spray paint and clear coat for the finish. Jeff dipped into his spares box for the NOS bottle and added a Spot Model fire extinguisher.

KEITH CAMPBELL
PEORIA, ARIZONA
This is Keith's Takom 1/16 scale Willys MB Jeep, built out of the box with no modifications or add-ons. He painted the model mainly with Ammo and Vallejo acrylics and weathered with artist oils.

MARK TYLER
ALPHARETTA, GEORGIA
Mark built the Hasegawa "The Idolmaster Futami Mami" 1/48 scale F-16 for his first Hasegawa kit. He says he "spent more on all of the additions than the actual model." Mark's additions include an Eduard Sniper Pod, Royale Resin Antenna Upgrader Set, Caracal: USAF F-16C "Dark Vipers" decals, and GT Resin 1/48 ALQ-184 ECM Pod and F-16 Wild Weasel Set. He referenced *The Scale Viper: A Modeler's Guide to Building the F-16* by Pete Fleischmann and *The Modern Viper Guild, 2nd Edition* by Jake Melampy.

◀ROBERT HOLMSTROM
MORRISVILLE, NORTH CAROLINA
Robert said the Tamiya 1/35 28(t) was an exceptional kit. He used Vallejo for all of the painting and weathering. Robert left off stowage because he thought it would have taken away from the color modulation. He included a simple base, scratchbuilt fence, and a tree made from seafoam.

◀GREG EMBREE
ARLINGTON, VIRGINIA
Greg built his first airliner kit, the Revell-Germany 1/144 scale Airbus A319, straight from the box. He painted it with Tamiya White Primer, Chrome Yellow, and coats of gray and metallic colors under clear with decals from the kit and Airline Decals. Greg built it as a memento of a flight from Calcutta to Bhutan with his wife, Suzanne, in 2015. He says Aaron Skinner's *Modeling Airliners* guided the project.

MERDC demystified

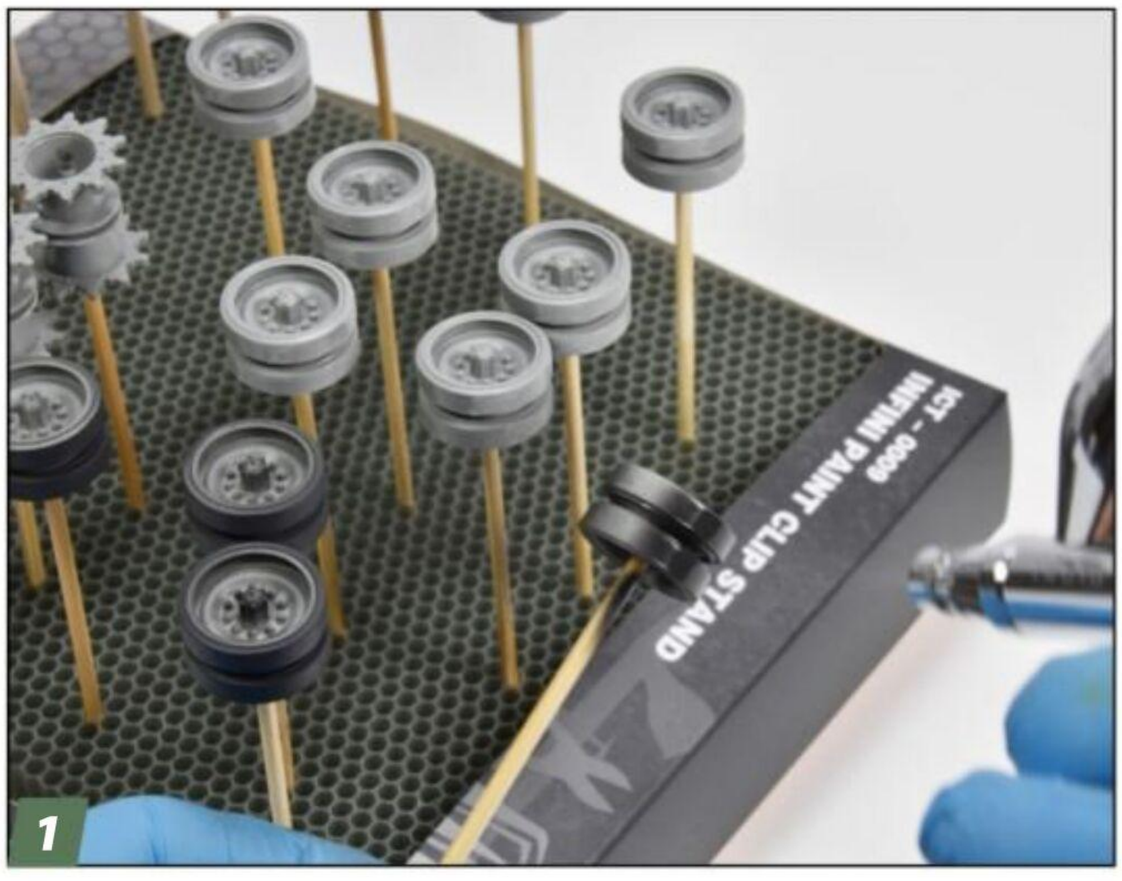
How to use an airbrush and hand-painting for the 1970s four-color camouflage

BY AARON SKINNER

After several decades of fielding almost nothing but overall olive drab or forest green, the U.S. Army and Marine Corps in 1975 adopted a set of four-color camo patterns developed by the Mobility Equipment Research and Development Center (MERDC). Eight patterns, with titles like Summer Verdant, Tropical, and Gray Desert, were created to help break up vehicle outlines in different environments with the idea that just one of the colors needed to be changed if the unit deployed to another locale. For example, the only difference between Summer Verdant and Winter Verdant is the second major color, light green, is replaced with brown field drab.

A technical manual specified the patterns for each vehicle then in service and indicated that the patterns should be followed as closely as possible. The two major colors were each to cover 45% of the surface with the remaining shadow and highlight colors each covering 5%.

It appears most vehicles left the factory in overall forest green and the camouflage was applied by the receiving units. It could be hand-painted, done with a spray gun, or applied with a combination of both methods. The last is the style I replicated to paint Winter Verdant camo on a Takom 1/35 scale M48A5.

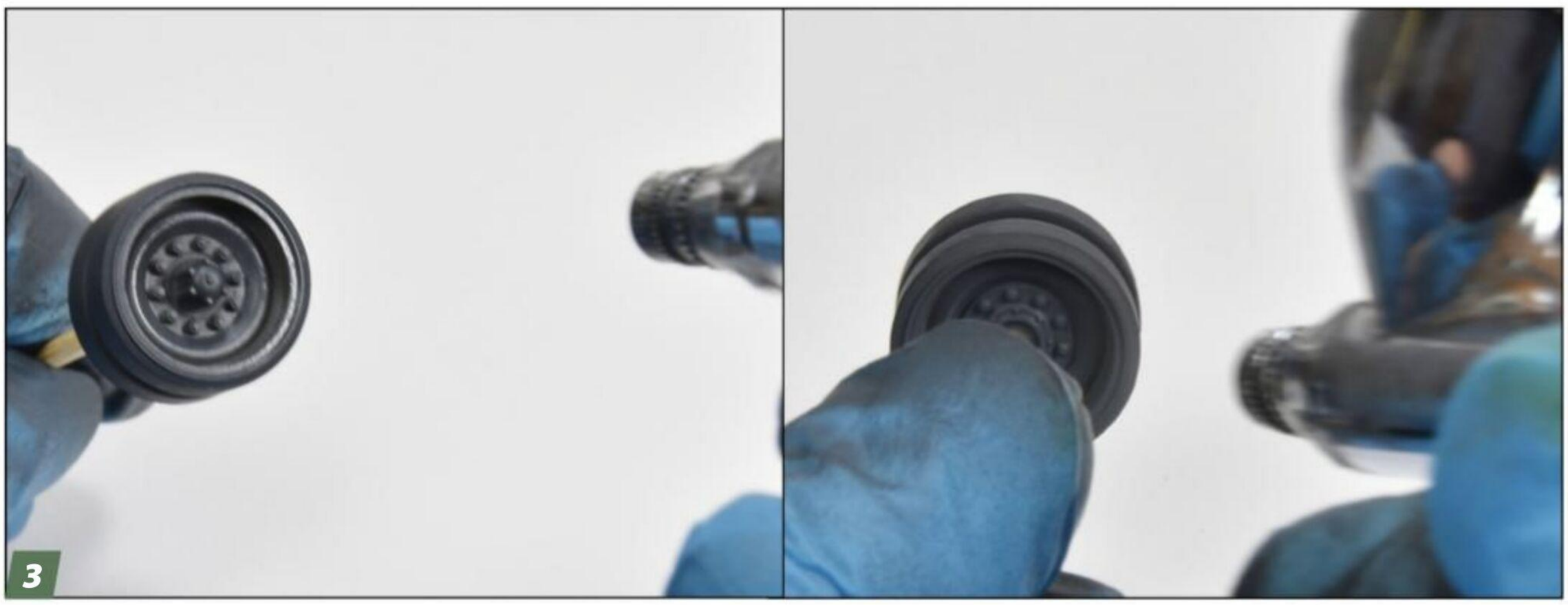


1

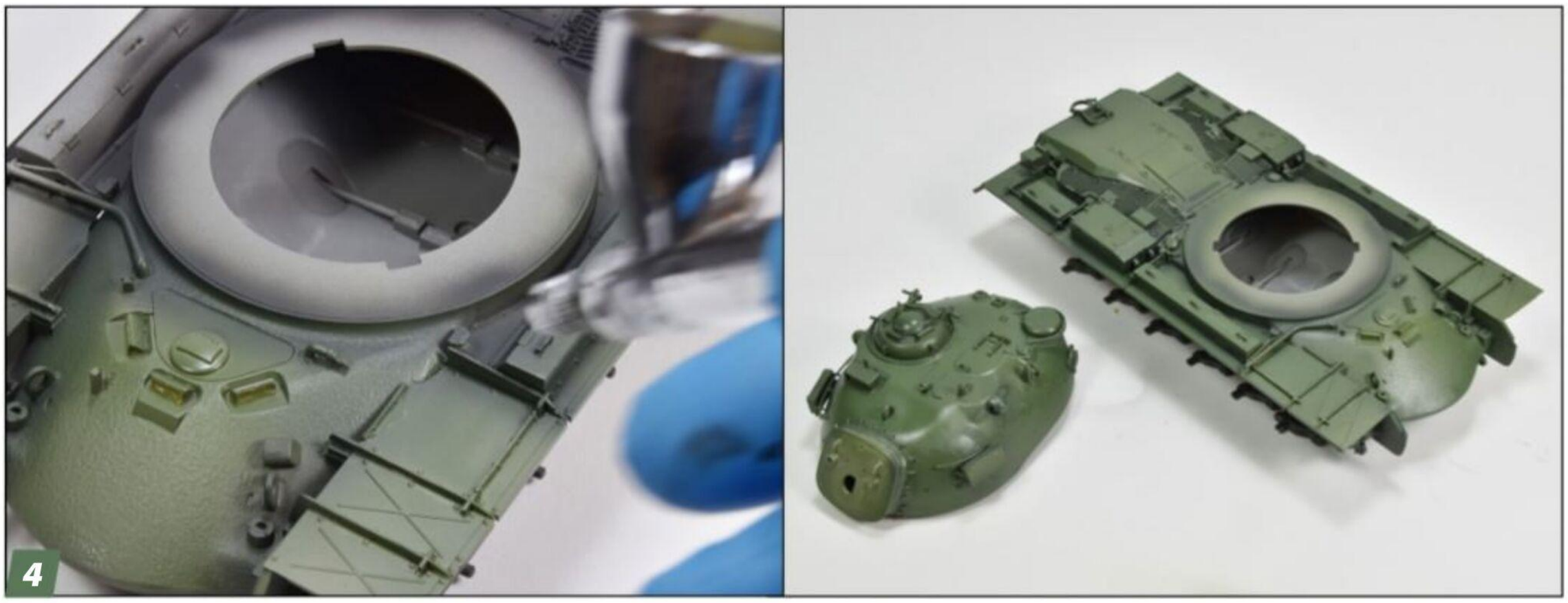
I mixed equal parts of Tamiya Flat Black (No. XF-1) and German Grey (No. XF-63) to serve as the basic tire color. Clipping the tips from bamboo or wooden skewers produced easy-to-use handles for the road wheels.

2

Having mixed quite a bit more of the dark gray color than necessary and not wanting to waste it, I sprayed it over the bottom of the hull and underside of overhangs on the fenders, toolboxes, and turret. It served as a dark primer and deepened shadows.

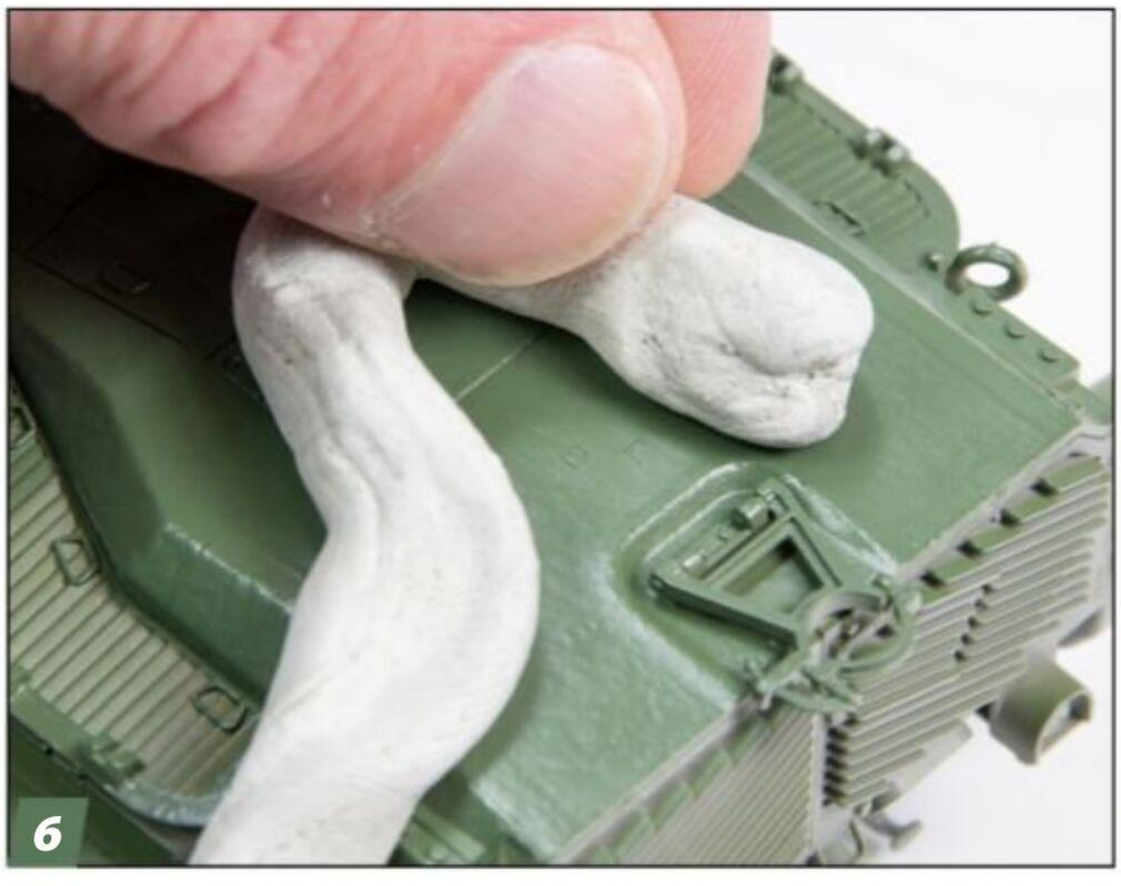

3

To paint the sides of the tires, I mixed Tamiya Flat Black (No. LP-3) and IJN Gray Yokosuka Arsenal (No. LP-15) lacquers. I airbrushed this new color to the outer and inner sides of the M48's road wheels.


4

For the camouflage base coat, I airbrushed the hull and turret MR Paint Field Green (No. MRP-236). This lacquer is airbrush-ready straight from the bottle — no thinning needed! — and covers well without obscuring detail.

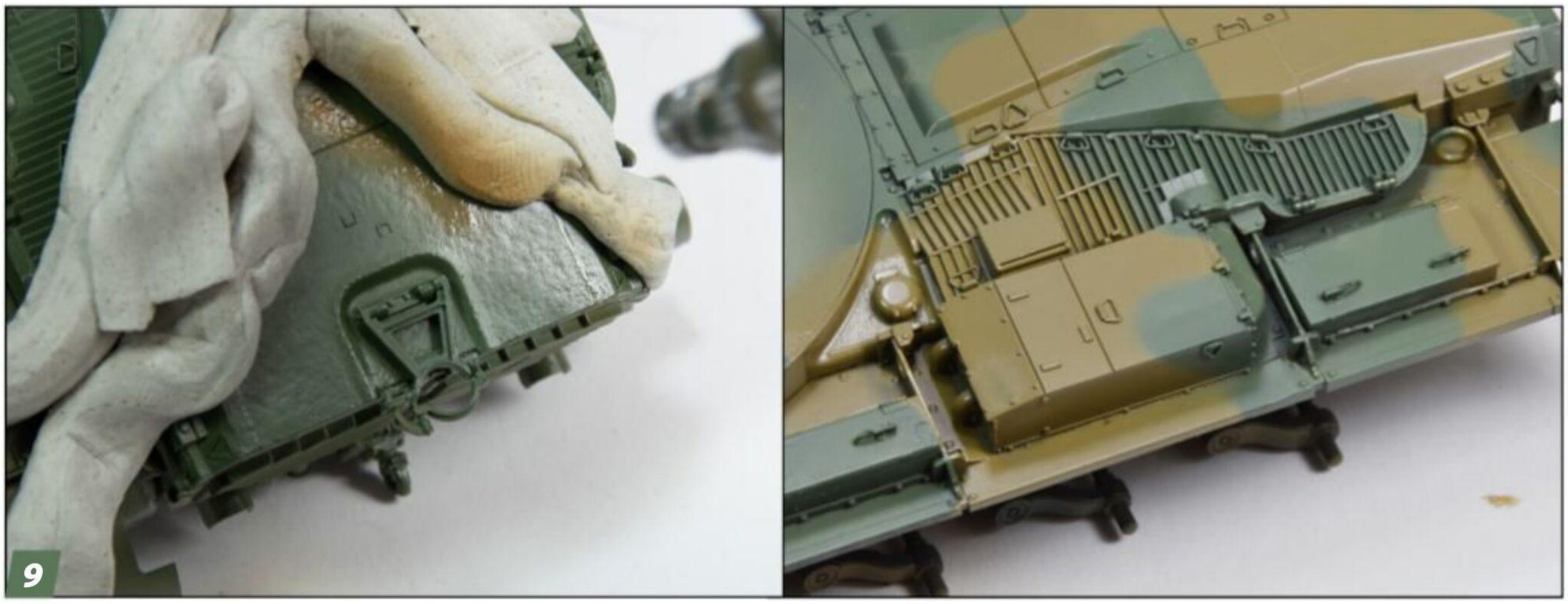
I used a circle template to mask the rubber when I airbrushed the hubs of the road wheels and the return rollers with field green.



Poster putty, like Blu-Tack, is the perfect tool to produce just slightly soft edges between colors as seen in photos of vehicles with MERDC camo. Relatively easy to use, I rolled the poster putty into worms and curved it across the tank's surface.

I used a toothpick to push the poster putty into recesses and refine its shape.

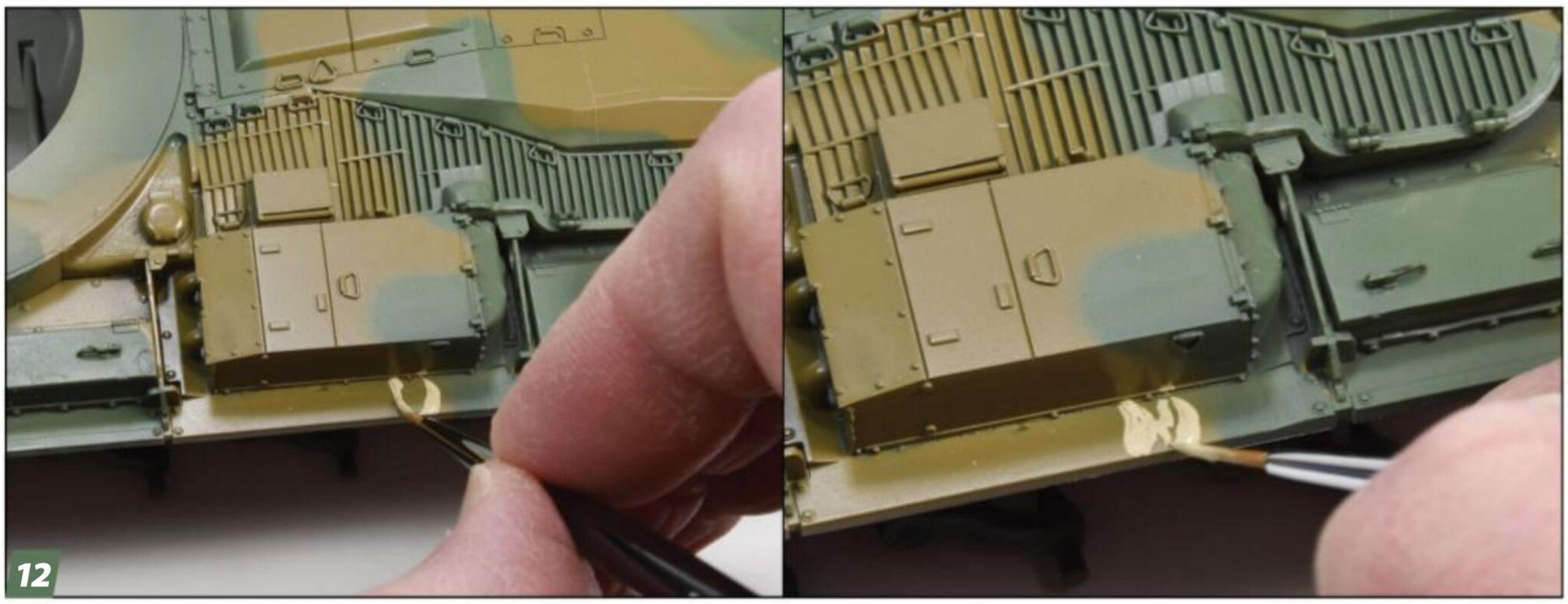
This process is time-consuming, but the results it can produce are well worth the effort.



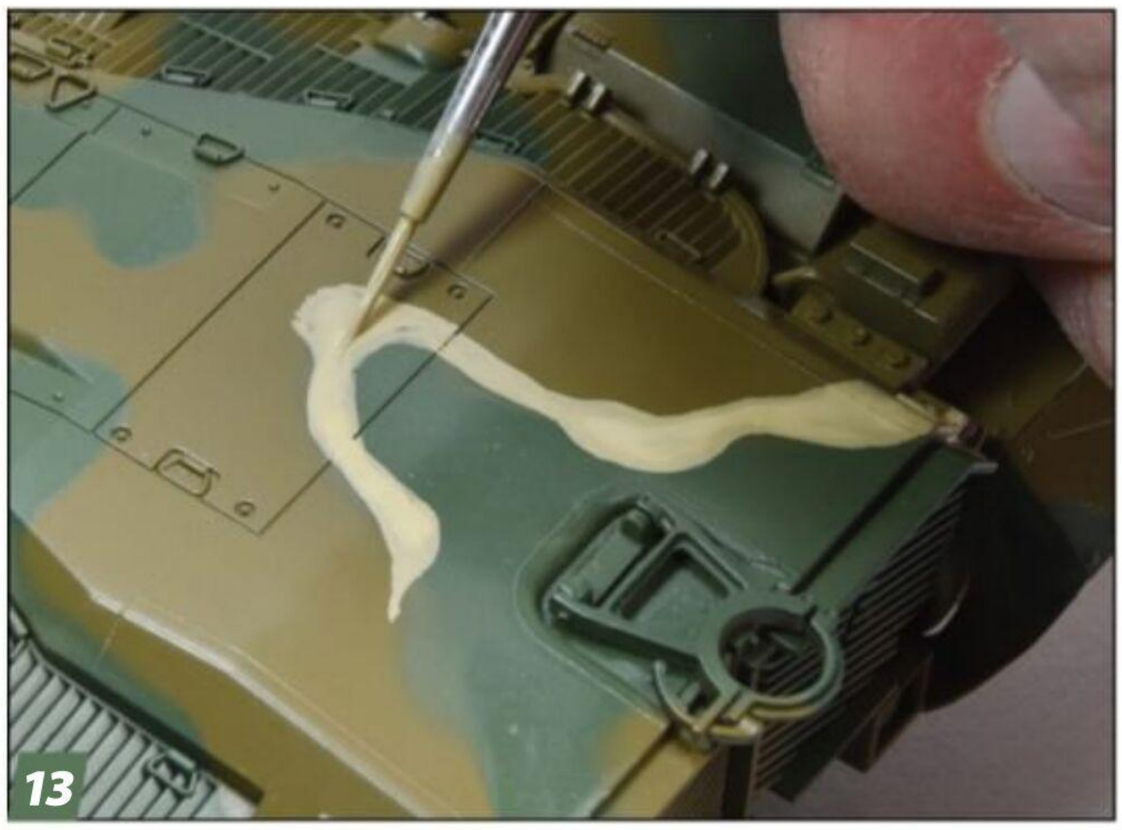
For the second color, I turned to MRP Dark Earth (No. MRP-145), again airbrushing the lacquer decanted right from the bottle without any thinning. Spraying it straight down over the edges of the poster putty creates just the right amount of overspray for the proper effect.

Preferring Vallejo acrylics for hand-painting, I picked Panzer Aces Afrika Korps Highlights (No. 70.340) as a match for the sand shade on the camouflage. Before dipping the brush in the paint, I dampened it with water and blotted excess on a paper towel.

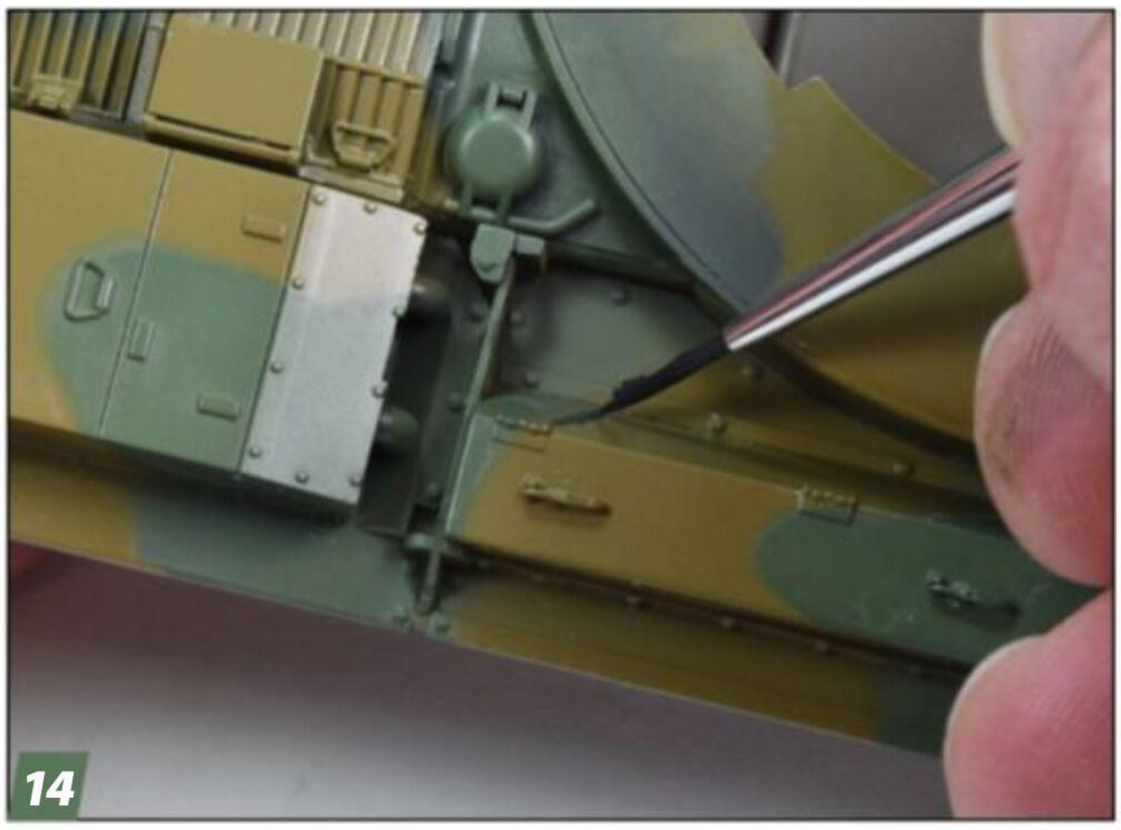
Vallejo acrylics flow better with a little water. After dipping the brush in the paint, I touch it to water.



I started each section of the sand by outlining it with the fine brush and then filled in the area with more paint. Keeping the brush clean and wet helped the paint flow and minimized brush strokes.

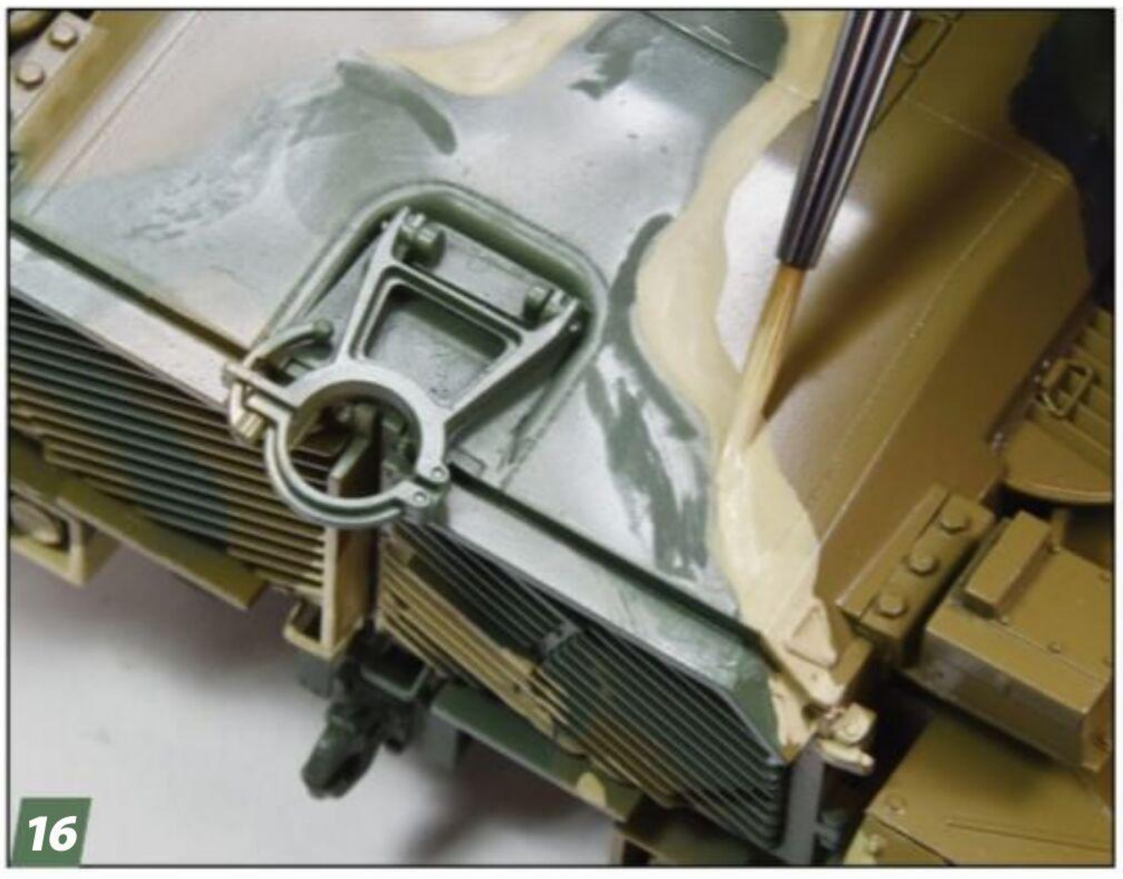


Continuing the process, I painted each section, trying to hew as closely as possible to the pattern defined in the official guidelines.



I repeated the process with the black areas using Vallejo Black Grey (No. 70.862). There were more of these areas than the sand color, but they are thinner, so I used a No. 1 brush to keep the shapes tight.

Adding the sand and black showed where I had made mistakes with the base colors, so I corrected them by airbrushing either green or dark earth over the problem areas.



After touching up the green and brown, I went back over any black and sand areas affected by overspray with a paintbrush. It may seem small, but this attention to detail will pay off in the overall appearance.

I left fragile items like the turret bustle basket and the smoke launchers until last. I airbrushed field green and dark earth off the model and then added the other colors as appropriate after attaching them.

FINAL THOUGHTS

THE MERDC CAMO PATTERNS can look intimidating, but don't fall for it. As with most scale-modeling tasks, employing the right tools helps. If you have a steady hand, it is possible to airbrush MERDC freehand. You can try masking the black and sand sections with poster putty (for softer edges) or tape if you prefer to airbrush them. I'm happy with how my M48A5 looks and think I might finish an M60 in the Desert Red scheme. **FSM**

Kitbash a better HUEY

Improve Monogram's venerable UH-1 with a HobbyBoss nose and tail

BY GREG KOLASA

Just as most modelers know that there is no such thing as the perfect kit, they also understand a new release of a subject is not guaranteed to correct the ills associated with an earlier kit of the same subject. I once corrected the then-new Hasegawa P-51 with wheels from a Monogram kit nearly a decade its senior. Sometimes, new releases feel like a step backward, so the only path to a more accurate model is to piece together parts from several kits.

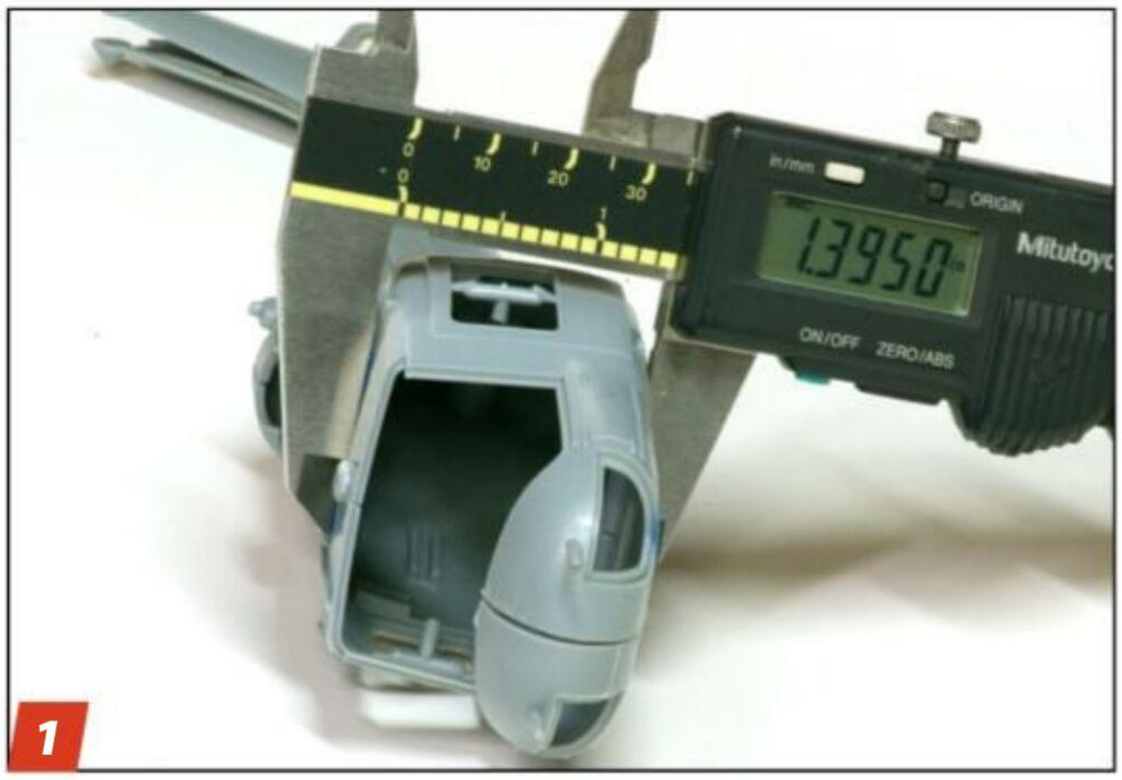
Twenty years ago, I built Monogram's 1/48 scale Huey and painted it like a boneyard Navy UH-1E I destroyed as part of my job as a munitions developer for the Army. That kit had decent surface detail, but like many early Monogram kits, it contained a mix of features from several variants, had some shape issues, especially the overhead cockpit windows, and some of the fits weren't great.

In 2012, HobbyBoss released a 1/48 scale UH-1C (No. 85803). That spurred me to build a second white-and-orange Navy Huey, this one a TH-1L trainer that I saw at the proving ground boneyard. But this

To replicate a Navy TH-1L Greg knew from his military service, he combined parts from two kits.

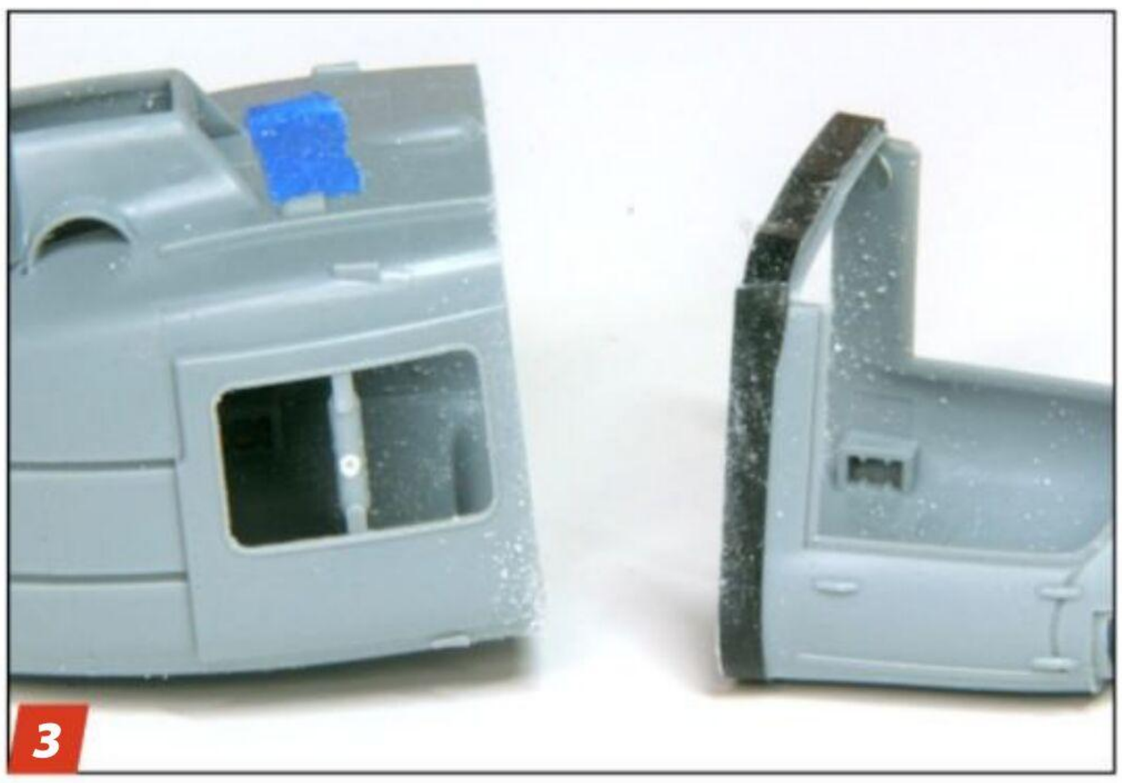
time, I wanted to model the Huey in its active-duty days. Naively believing the more recent HobbyBoss offering would correct the problems of the Monogram kit, I was mildly disappointed when I opened the box. While the overhead windows were correct and the clear parts fit better, the kit had slightly crude details and a toy-like appearance (the kit is part of HobbyBoss' Easy Assembly series), and surface detail lacked the definition of the earlier Monogram parts.

The two kits were the antithesis of each other. Monogram offered better details but with a challenging fit and no shortage of flash. The HobbyBoss had softer details, but it literally fell together by itself. Looking at my options, I decided to kitbash a better Huey by grafting the HobbyBoss nose onto Monogram's fuselage. I'd also correct other shape issues with the Monogram kit. My intent wasn't to correct every misplaced rivet or re-scribe each incorrect panel line on the Huey. But rather to turn the model into a scale replica closer to the real deal than either kit would have accomplished on its own.

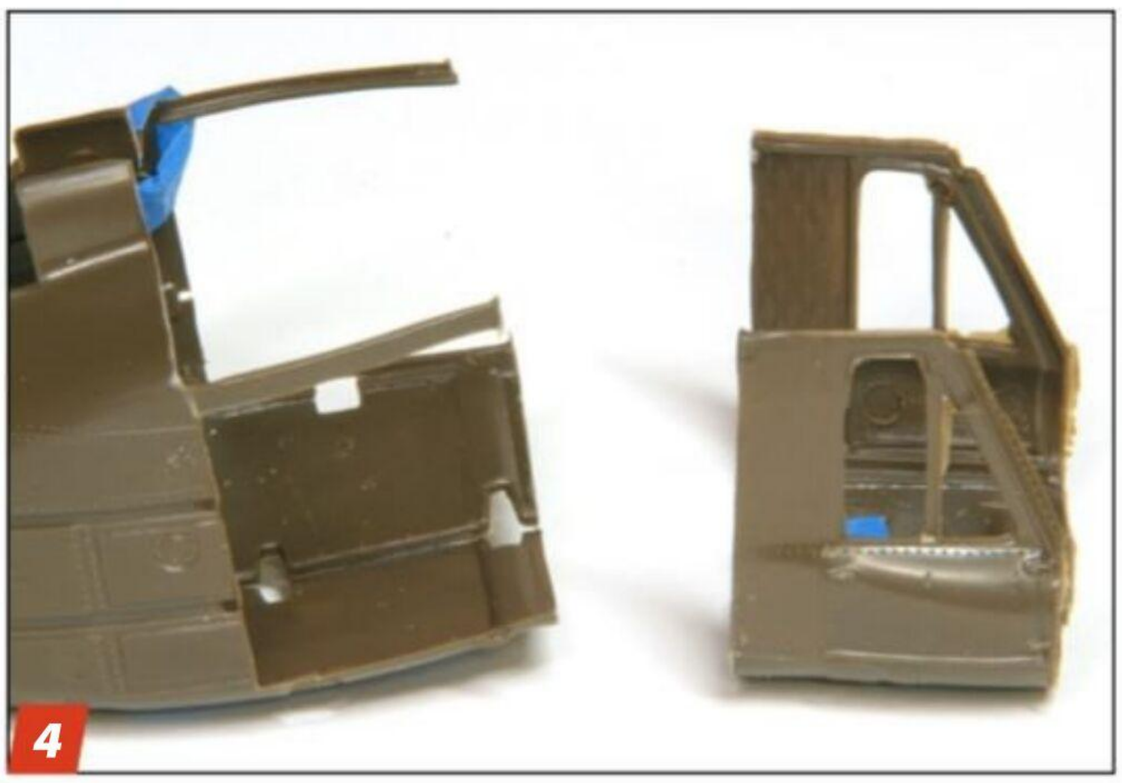


I determined to make the graft at the front edge of the cargo door opening. Monogram's (M) separate doors, the forward landing strut, and the kink between the cockpit and cargo sections would help hide the join. The fuselage dimensions were close enough for it to work.

I taped the forward halves of the HobbyBoss (HB) fuselage together and marked the line with electrical tape. Using a razor saw, I cut through the fuselage and separated the nose.



Molded in relatively thick, stiff plastic, the nose of the HB Huey held its shape after being detached from the fuselage.



The separate cabin roof complicated surgery on the M fuselage. I taped it together and sawed along tape guides. As soon as the nose was separated, the sides sprang inward like a mouse trap, giving the bottom a V-shaped cross section.

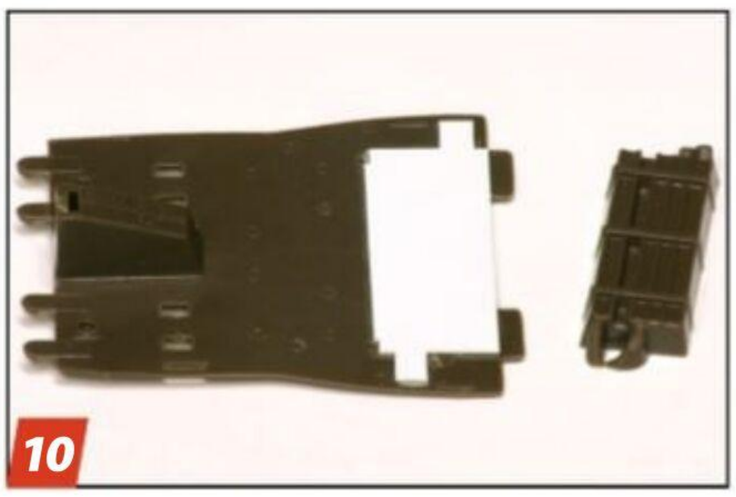
I shaved two small intakes off the M roof and saved them to replace incorrectly shaped intakes elsewhere. I also removed a bulge and fence that needs to be relocated for the TH-1L variant. Styrene sheet extends the cabin roof into the transmission intake.

Inside, I filled the hole left by the roof bulge and the roof extension with Tamiya putty. After it had hardened slightly, but was still soft, I pressed diamond-tread patterned styrene into the putty to match the molded quilting on the kit plastic.

Using a small chunk of plastic, I made an intercom box for the cabin ceiling. Fine coiled wire simulates the intercom leads. I painted the quilted soundproofing Model Master Aluminum (No. 1781), and then flowed Testors CreateFX Black Acrylic Wash (No. 79413) into the pattern.

M's tail features the narrow chord fin of early Hueys while HobbyBoss has the correct shape, albeit with less surface detail, required for the TH-1L. Following a panel line common to both, I spliced the rear section of the HB fin onto the M tail.

The M interior has a more detailed floor, better seats and controls, and a more realistic instrument panel; careful painting brings out the details. I built the interior subassemblies — seats, pilots, instrument panel, troop seat — to be installed later.

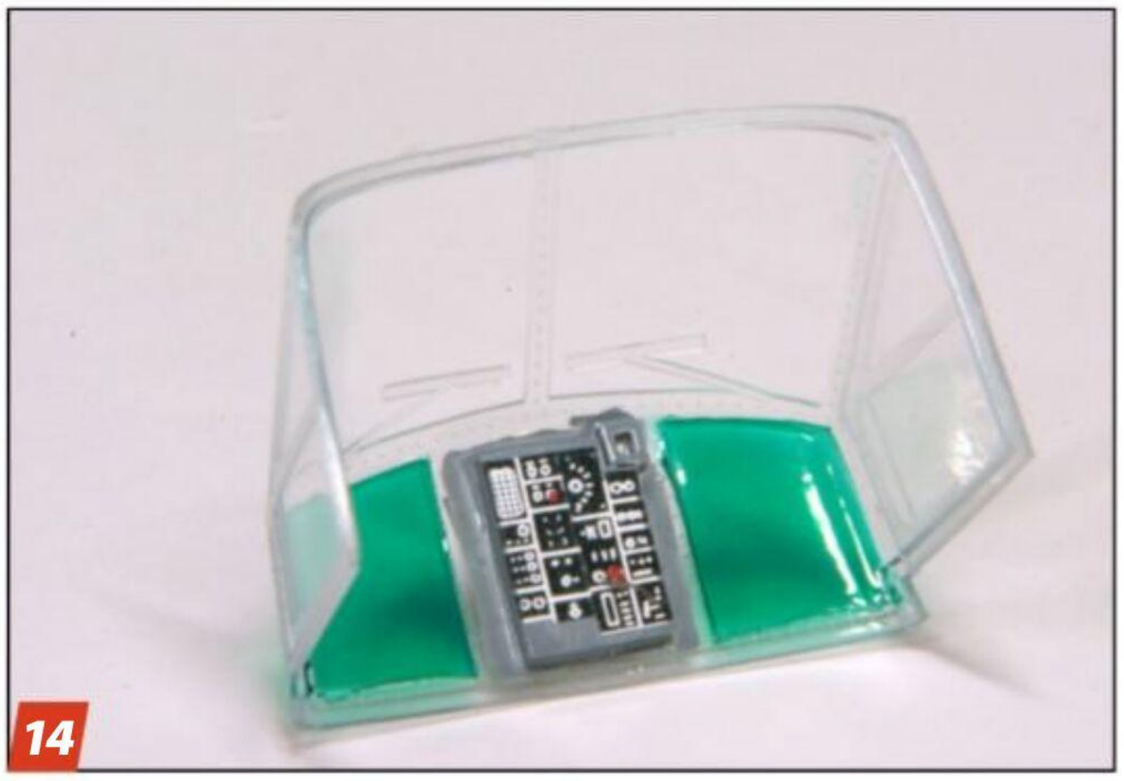


I removed the molded-in ammo storage boxes under the rear troop seat and covered the resulting void with sheet styrene. For the seat, I used the HB support, which needed to be shortened slightly, and the M seat because it had better seat-belt detail.

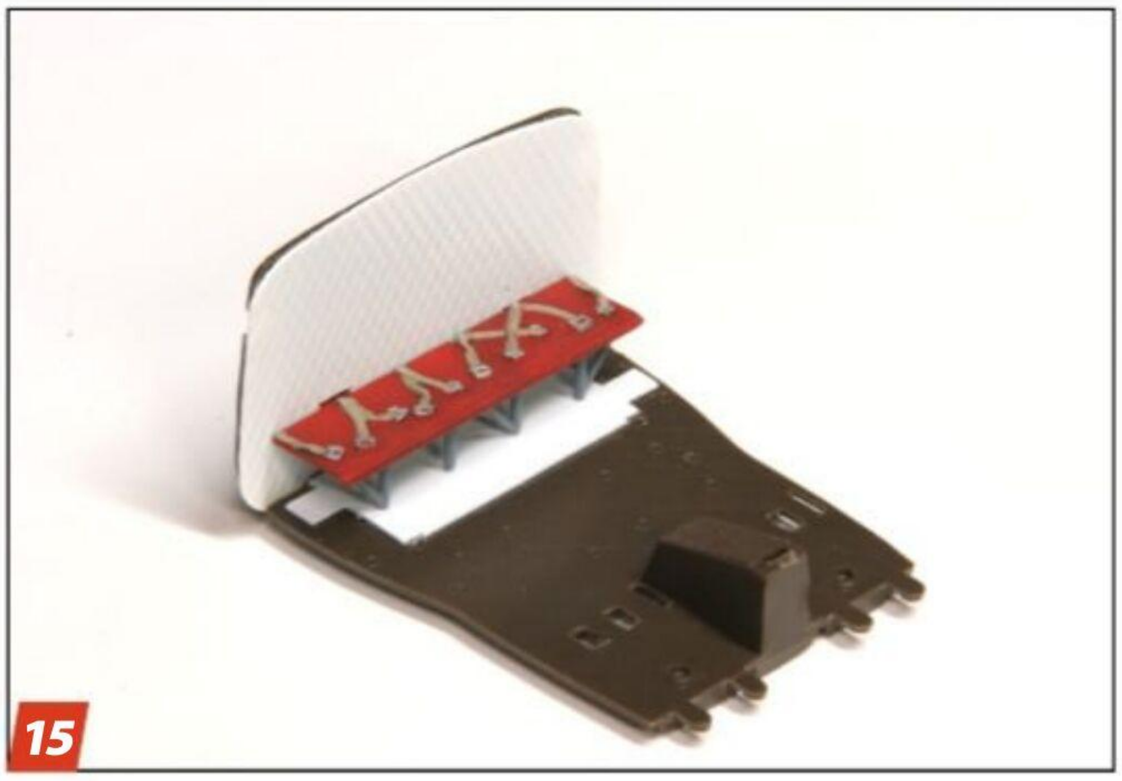
To represent the TH-1L unarmored seats, I removed the molded plates from the M pilot seats.

The M kit has decent pilot figures (despite the flash). I repositioned the pointing pilot's legs for fit. The other pilot got a new head and arms from my spares box to improve his appearance and fit the controls. His legs also had to be adjusted.

Naval aviators donned green Nomex flight suits and gloves, black boots, and white helmets. The molded shoulder and lap belts were a bit soft, so I replicated them with masking tape. After hitting the figures with Dullcote, I glossed the helmets with Model Master Clear Top Coat.

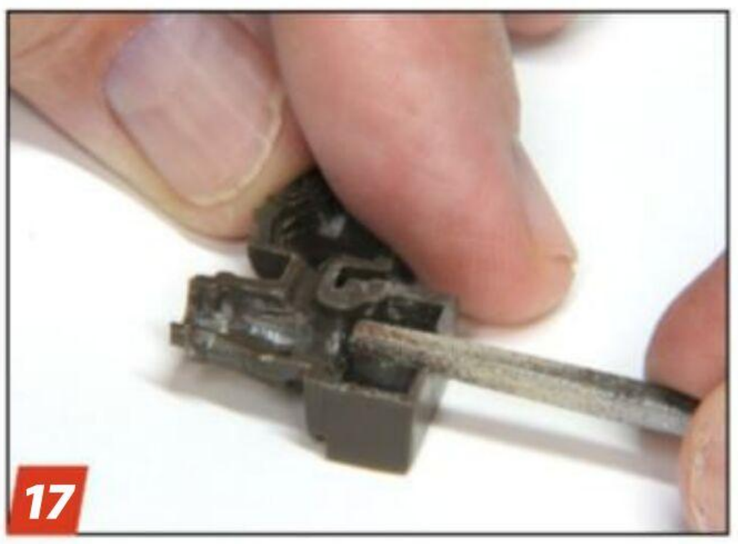


I masked the HB overhead windows and sprayed them with Model Master Transparent Green acrylic (No. 4668). The console is thick styrene sheet detailed with a decal from my spares. It also serves as backing for filler when the thick, hollow antenna gets removed from the roof.



I sanded the front of the kit bulkhead smooth and glued .5mm diamond-tread styrene sheet to it. The sheet is .07 inch wider than the kit part for a better fit with the roof. I cut the seat mounts through the diamond tread.

I used the M kit's better detailed main-rotor blades after filling ejector-pin marks and sanding them smooth. Then I ran the blades under hot water and introduced ever-so-subtle droop to each (the blades on the real Huey are relatively stiff and show only the slightest droop). The HB kit's tail rotor was more refined, but I had to fill deeply engraved guides for the tail tip markings.

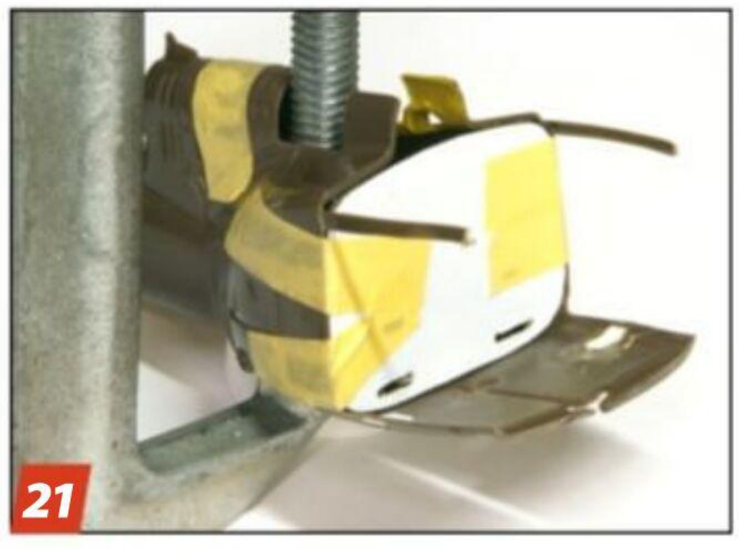


Monogram would have you trap the main rotor shaft between the transmission halves early in the build, but that can leave it vulnerable to damage. To install the main rotor after assembly, I filed the bottom of the shaft into a key and filed a corresponding keyway in the bottom of the transmission housing. Now, the shaft could be dropped into place and locked after assembly was completed.

Likely patterned after the prototype Huey, the Monogram engine exhaust protrudes too far aft of the engine cowling. Because of its bell shape, simply shortening it would result in an exhaust too small in diameter.

I spliced in the HB exhaust, which has rudimentary turbine detail inside but is quite thick. I reamed out the inside diameter to produce a more scale-thick aft edge and then scribed in the circumferential seams by laying a hobby blade flat on top of plastic stock.

I tacked the exhaust to the M kit's shortened engine assembly to check its corrected appearance. Removing the lip at the base of the HobbyBoss exhaust allowed me to leave it separate for painting.



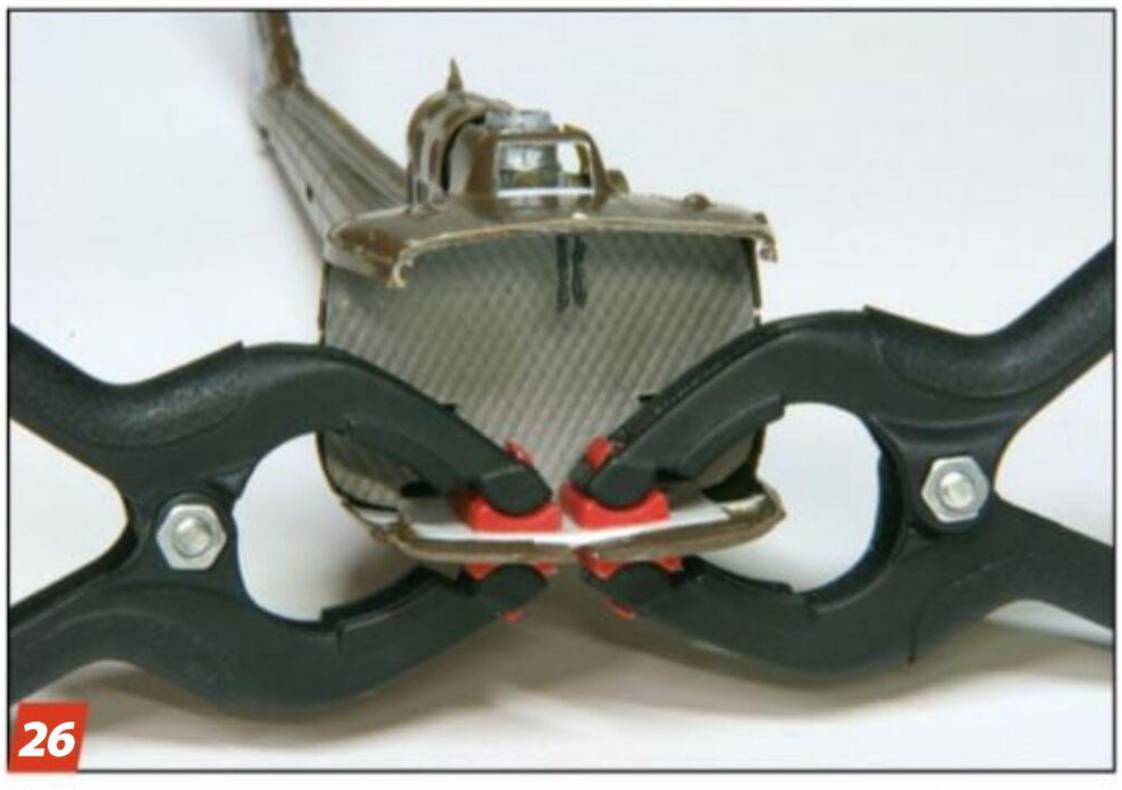
To spread the M kit's cabin to match the HB kit's nose, I cut 1/16-inch styrene to fit the lower fuselage behind the rear bulkhead. Taping the widened bulkhead into position, I glued the styrene in place and clamped it. The ammunition feed slots in the belly were covered from the inside with styrene sheet.

When the glue had cured, the stiff styrene brace forced the fuselage back into its original flat-bottomed shape. You can see by the gap that the fuselage is indeed wider than it was.

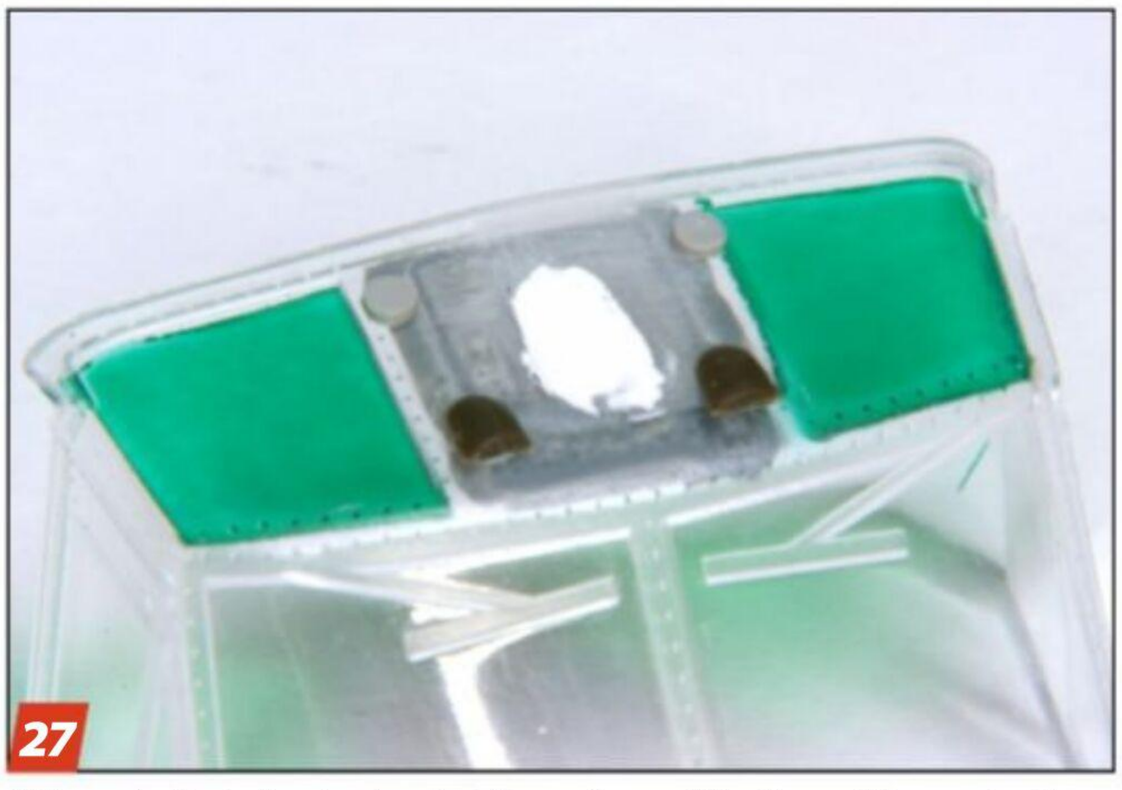
After painting the bulkhead aluminum on the cabin side and Model Master Zinc Chromate (No. 1184) on the engine side, I attached the engine to the transmission and added them to the fuselage. The separate roof fit the widened fuselage perfectly.

After I was sure the glue holding the roof was completely dry, I shortened it to match the sides and floor with a razor saw.

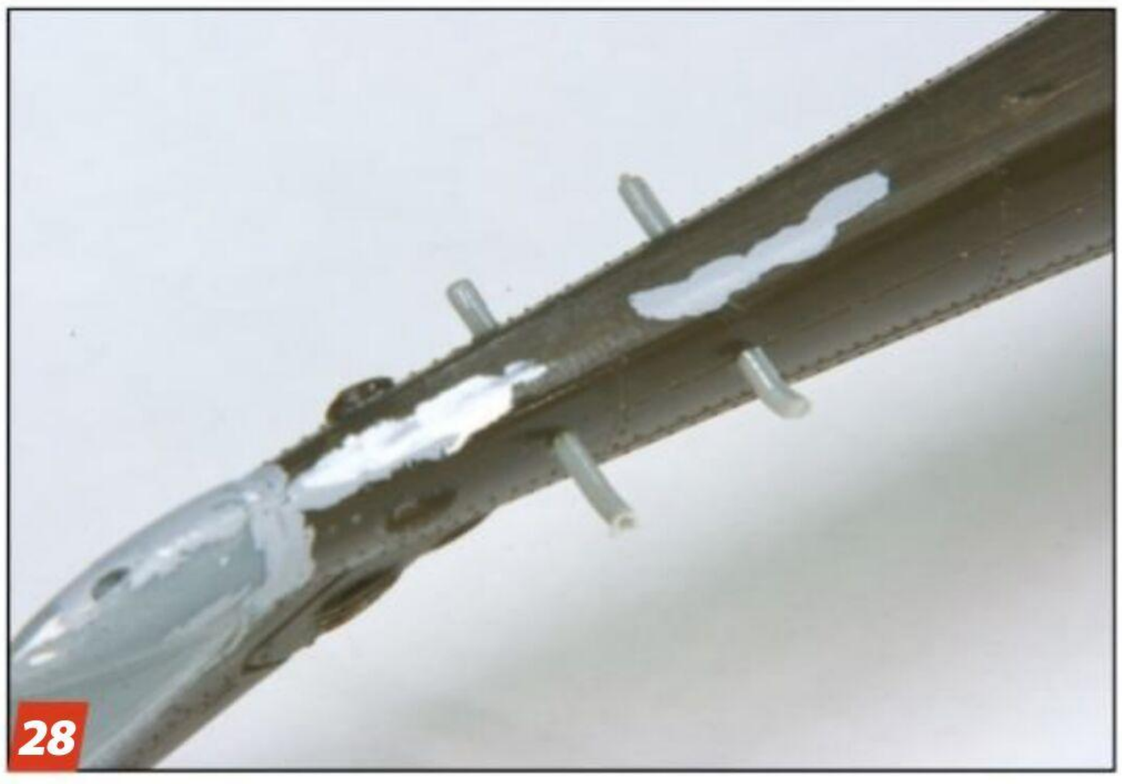
The moment of truth: I test-fitted the HB nose to the M fuselage. It was good at the top but the bottom still needed slight spreading and flattening for a perfect graft.



Final fuselage reshaping was done by clamping another thick piece of sheet styrene into the lower fuselage — it fits under the cabin floor. Copious amounts of glue ensured it wasn't going anywhere.



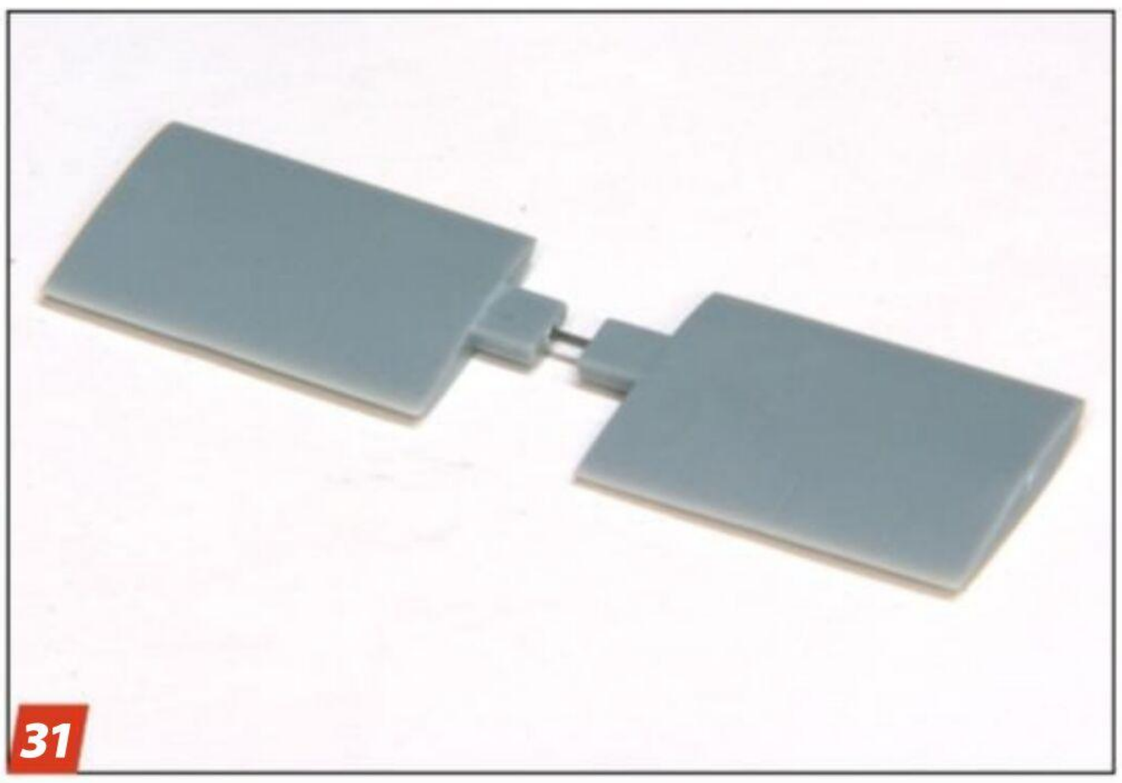
HB's cockpit glazing is nice, but it needs modifications. After protecting the windows with several layers of tape, I cut off the wide, hollow antenna and incorrectly-shaped air scoops. I replaced the latter with the scoops sliced from the M roof and added two small circular discs.



I plugged unneeded antenna mounts on the tail boom with pieces of styrene rod glued in place, and trimmed and sanded them flush. The same process was used to plug two holes flanking the transmission air intake on the cabin roof.

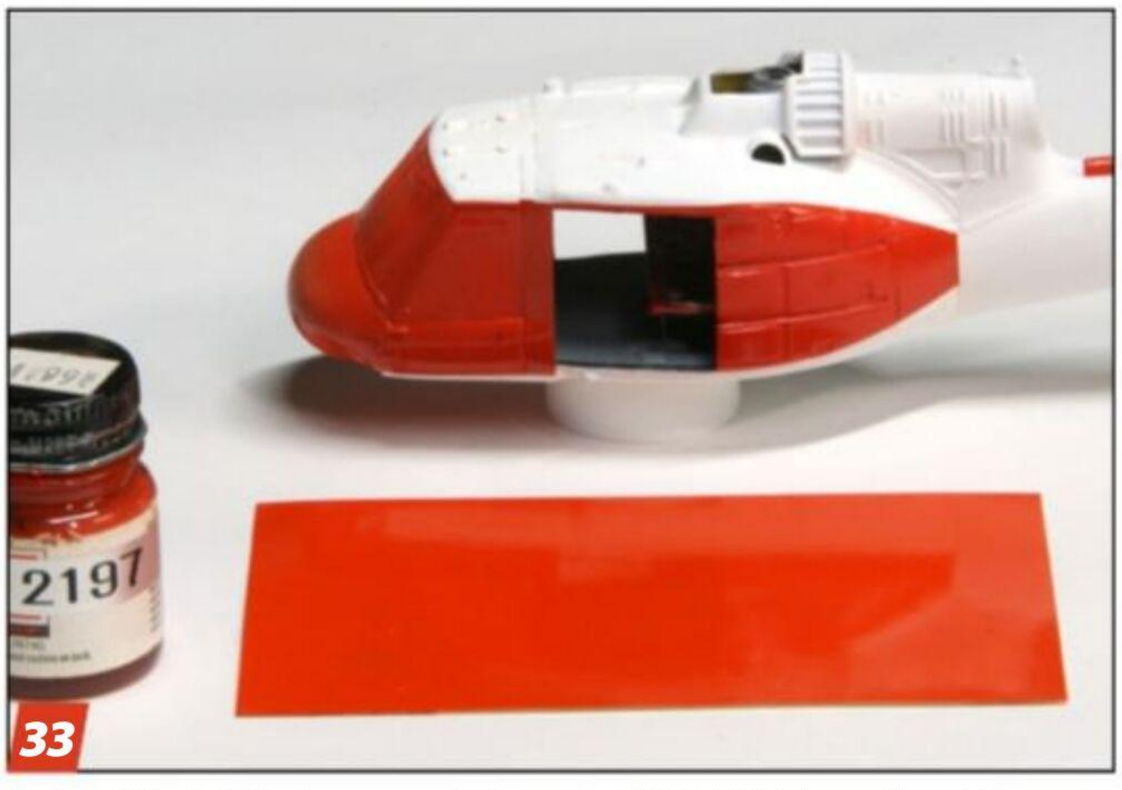
I filled the gaps underneath with styrene strips and added the interior subassemblies. To ensure the Huey wouldn't be a tail-sitter, I filled the cockpit center console from the underside with lead shot and pounded some lead chunks flat and glued them under the floor.

After priming the rear fuselage, I used a dab of clear RTV silicone adhesive/sealant (aka, bathtub caulk) under the floor to be sure it didn't move as I glued the HB nose to the M fuselage. Test-fitting showed that the HB clear parts fit perfectly.



Monogram's narrow-chord horizontal stabilizers are only correct for a UH-1A, so I used the wider HB parts. That meant widening the mounting slots, which weakens the joins; steel music wire ties the stabs together and strengthens the connection.

In preparation for the Naval Air Training Command white-and-orange scheme, I brush-painted areas where the airbrush likely wouldn't cover well, masked where appropriate, plugged the door openings with foam, and airbrushed a base coat of Model Master Flat White (No. 1768).



I mixed Model Master enamels to match FS12197 International Orange on a Federal Standard 595B color chip. The color was available in Model Master acrylic but not my preferred enamels.

A drop of white into flat black simulated slightly sun-faded paint to airbrush the antiglare panel and landing skids. A mix of dark gray and black with a little sanding dust stippled onto the roof replicated the walkway. I masked the straight edges and freehanded the curves.

To mark the TH-1L, I combined 1/72 scale "NAVY" titles from an F-14 sheet, national insignia from a 1/48 scale F-105, intake warnings from a 1/72 scale RA-5, and other stencils from spares. The nose's compound curve made applying the dry-transfer modex number a challenge.

Shaped bits of fine brass wire with pointed ends simulates the Huey's teardrop door handles. Brass wind deflectors, slotted at the bottom like the real ones are a nice detail and help conceal the transition between the HB nose and M cabin doors.

FINAL THOUGHTS

I DETAILED THE UNDERSIDE with tie-down rings, drain and vent tubes, an aerodynamic fence, and a cargo hook. On top, I added a scratchbuilt hoist motor dome, improved navigation blister, a small-blade antenna, and pitot tube to finish my Navy Huey. The 1965 Marvin Gaye and Kim Weston hit *It Takes Two* describes the best approach to produce a more accurate Huey. **FSM**

THE EYES have it

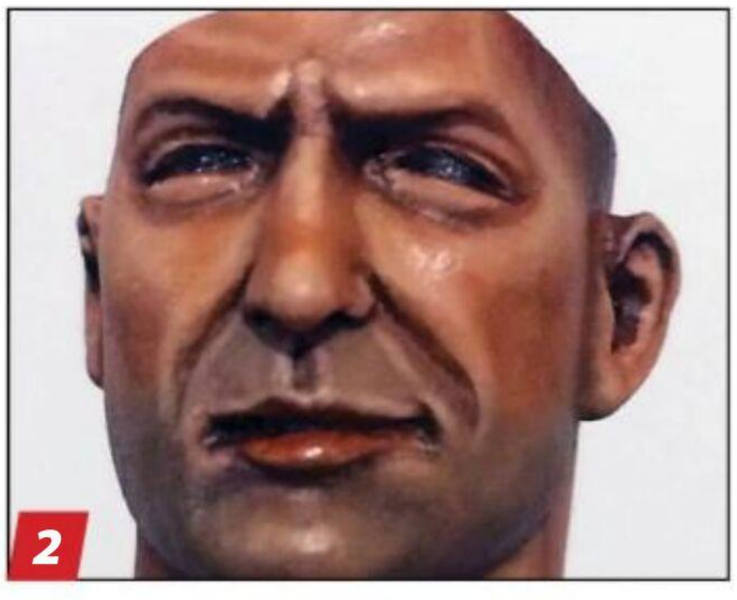
Practice painting whites, irises, and pupils on a bust

BY BRIAN WILDFONG

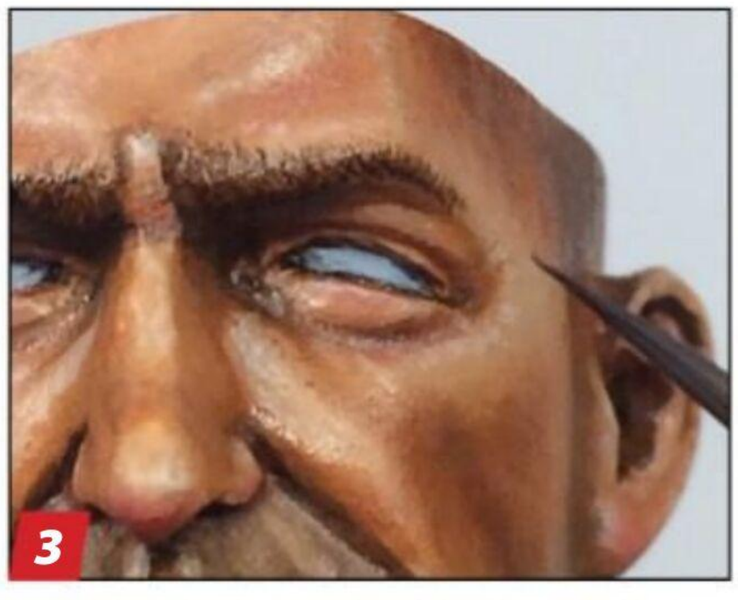
While its origin is unclear, we all know the saying "the eyes are the windows to the soul." As a figure painter, my goal may not be to capture the subject's inner life, but there's no denying that eyes are critical — if not the most critical — parts of the face to render accurately. No matter how well the rest of the figure is done, the realism of the eyes often spells the difference between creating an average piece and a showstopper.

There is no reason for the terror that painting a figure's eyes seems to induce in many modelers. By breaking the process down into a series of logical steps, even something as seemingly complex as eyes can be made more manageable — and maybe even enjoyable! With busts, it's especially important to produce realistic eyes because the focus is the head and shoulders. The subject here is a beautifully sculpted 1/10 scale Marine circa 1944-45 by Young Miniatures (No. YM1813).

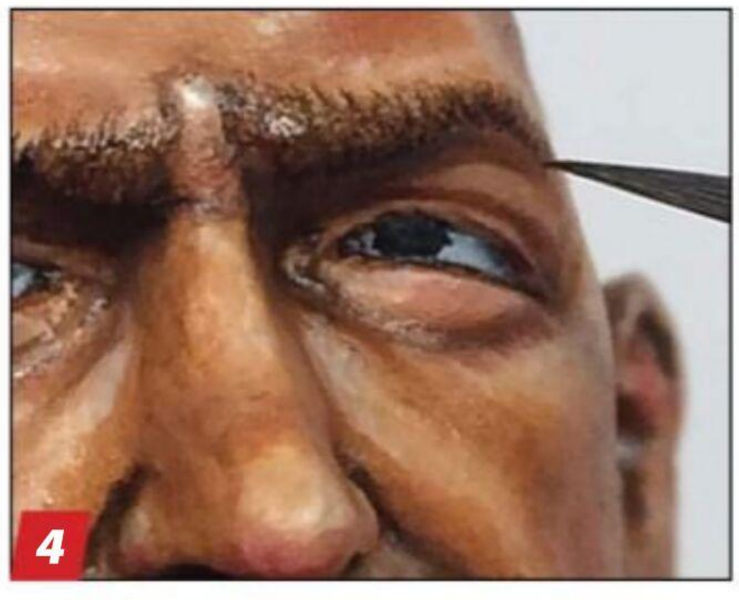
I started by base-coating the head with a skin color mixed from burnt umber, yellow, and white. At 1/10 scale, the eyes are well defined and large enough to more easily practice the basic steps in painting eyes.



Using artist oils, I painted the head's shadows and highlights and filled the eyeball with a coat of raw umber.

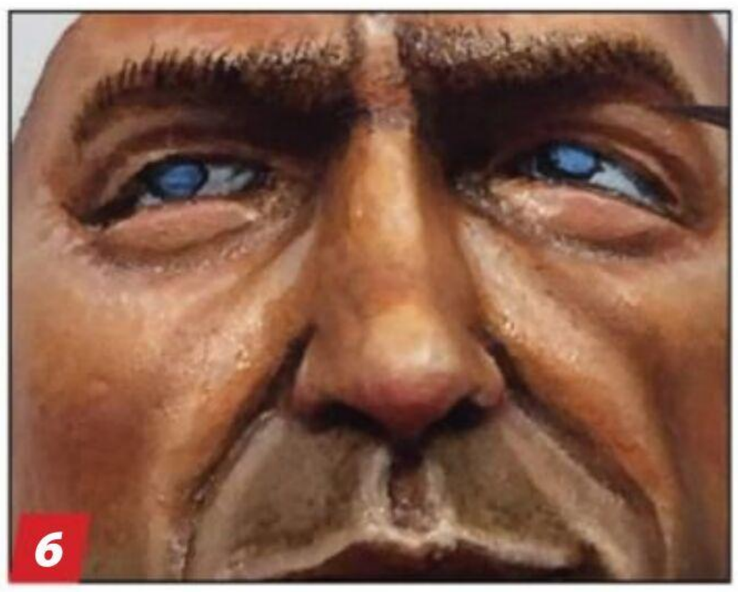


Next, I brushed a couple of thin layers of light gray acrylic over each eye, taking care to leave a thin line of the raw umber around the perimeters to simulate the shadows cast by the eyelids. Using light gray rather than white keeps the eyeballs from looking too stark.

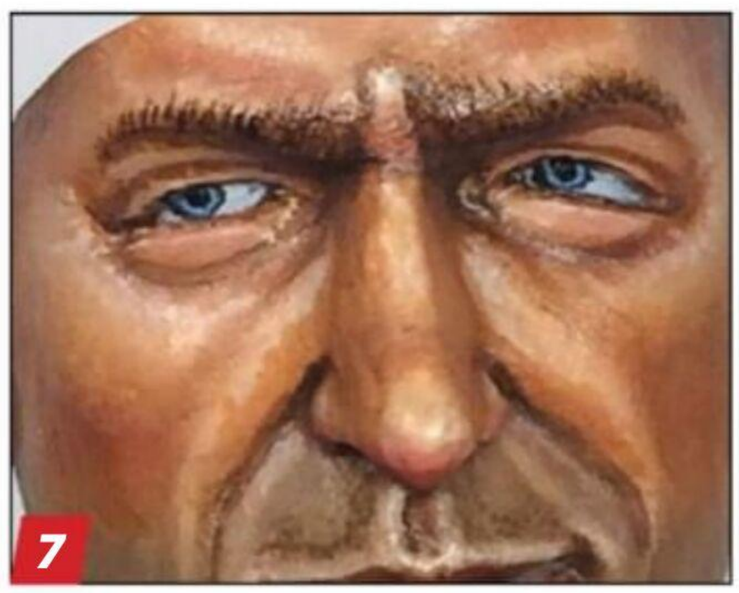


With a fine-pointed 0 brush and a small amount of lightly thinned black acrylic on the tip, I base-coated the irises. Start with a tiny dot and gently apply pressure to slowly widen the circle in all directions. This is the most crucial part of painting eyes because they need to be the same diameter and must be identically spaced relative to the left and right.

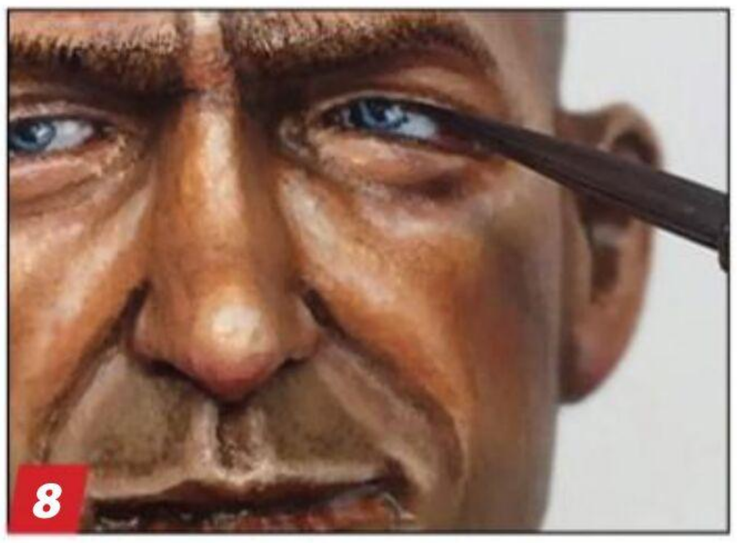
After applying the irises, step back and critically examine them for size and spacing. Irises are circular but the very top of the circle is slightly covered by the upper eyelid and the bottom just kisses the lower eyelid. If needed, you can enlarge the iris with more black or reduce it with more gray. In some cases, I've completely repainted the whole eyeball with light gray and repeated the iris steps to better match the opposite eye.



Once you're satisfied with the irises, add color. I prefer a light blue-gray mixed from medium blue, white, and a touch of black acrylics. Adding gray keeps the blue from appearing unnaturally bright. Again, use a fine brush with just a little, slightly thin paint on the tip of the to make this blue circle. Leave a narrow ring of black around the iris to clearly separate it from the white of the eye.



Apply the pupil next. This is simply a very tiny dot of unthinned lamp black oil paint applied with the tip of my best 0 brush. Aim for the dead center of each iris. If you need to correct it, use a bit of white spirit on a brush to remove the oil paint without disturbing the acrylic used for the iris and eyeball. Let this sit for at least 24 hours to allow the oil paint to dry, which is crucial for the next step.



To really bring the eyes to life, add a tiny white catchlight to simulate reflected light. I apply a tiny dot of titanium white oil paint at a spot where the pupil meets the iris. That is why the pupil must be thoroughly dry; putting white over wet black would cause the catchlight and pupil to blend, ruining the effect. Match the size and the placement of the catchlights in each eye.

As a last step, I add a tiny speck of red oil paint to the corners on each side of both eyes to replicate blood vessels concentrated here. As with the catchlights, I used a fine brush with just a bit of paint, so corrections can be made without disturbing the underlying gray acrylic.

FINAL THOUGHTS

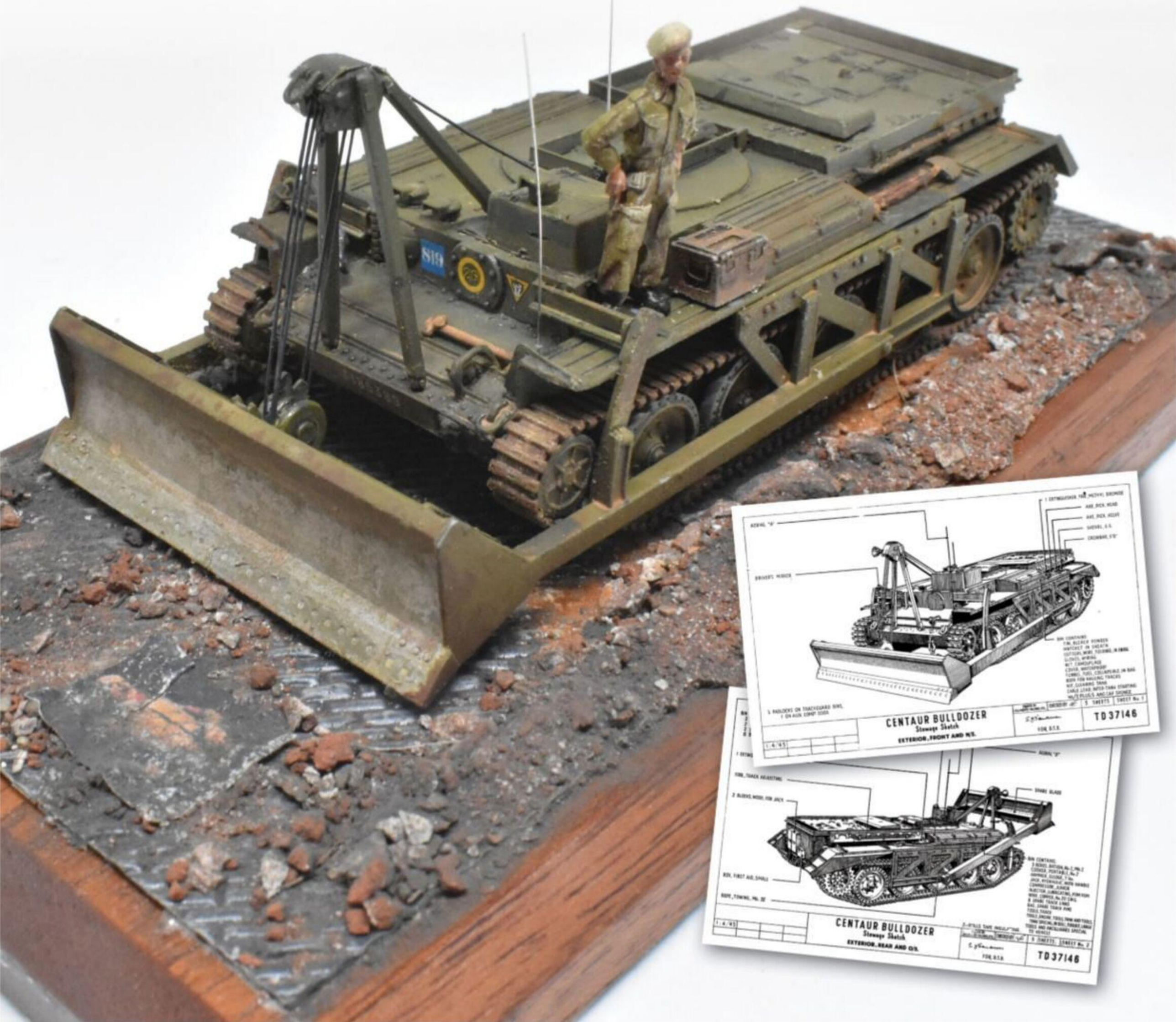
WHILE SOMEWHAT FINICKY given the size, eyes are like any other detail on a model. Breaking the process into smaller steps makes a seemingly complicated task far easier to accomplish and produces consistent results.

I've adapted this technique for figures as small as 1/16 scale. Note, that as a figure gets smaller, so do the eyes and some of these steps may need to be simplified. How small can I go? I'll keep you posted! **FSM**

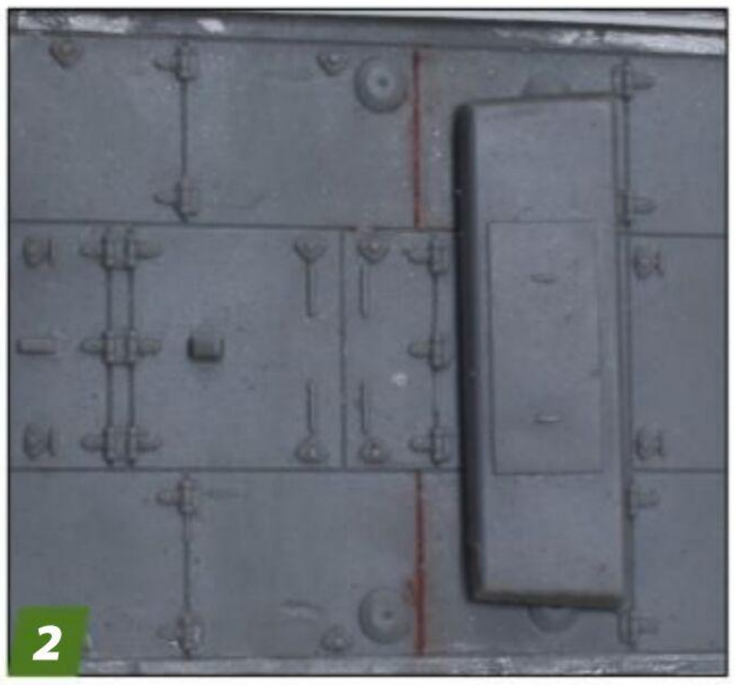
Improve an
IBG CENTAUR 'DOZER

How-to build a better 1/72 scale engineering vehicle

BY STEVE GUTHRIE



I carefully sliced the kit's three periscope covers from the upper hull with a hobby knife, sanded the areas flush, and glued the Dragon Churchill parts to replace them.



After cutting off the handles indicated in the instructions and smoothing the spots with a sanding stick, I filled designated panel lines with Bondo Glazing & Spot Putty.

To properly represent a Centaur bulldozer, I detailed the new turret-ring cover with a hatch and ventilator made from styrene strip and rod cut and sanded to shape.

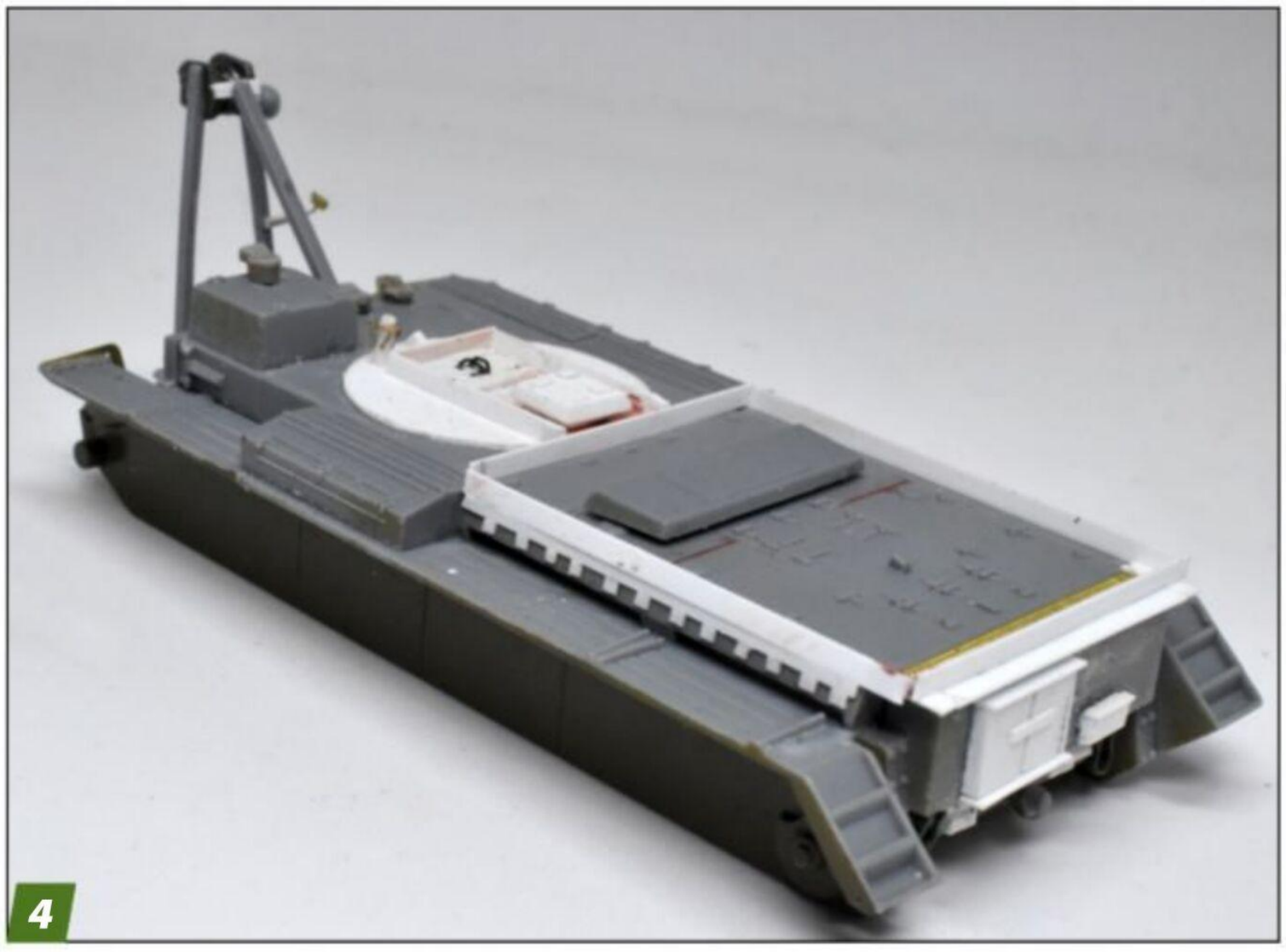
As the Allies pushed into Germany near the end of World War II, planners realized that rubble choking city streets would hinder advancing armor. While there were armored bulldozers developed by the British 79th Armoured Division, led by Major Gen. Percy Hobart, they were based on commercial tracked tractors and consequently slow and susceptible to mines. Tasked with developing a vehicle that could keep up with tanks, the boffins (otherwise known as tech experts) from the 79th added a bulldozer blade and its associated equipment to surplus Centaur tanks with the turrets removed.

Powered by a 12-cylinder Liberty engine, the Centaur was one of the first two of a family of British cruiser tanks launched in 1941. The other was the Cavalier. The last member of the family, the Cromwell, powered by a de-supercharged version of the Rolls-Royce Merlin aircraft engine was the only version to see action as a gun tank.

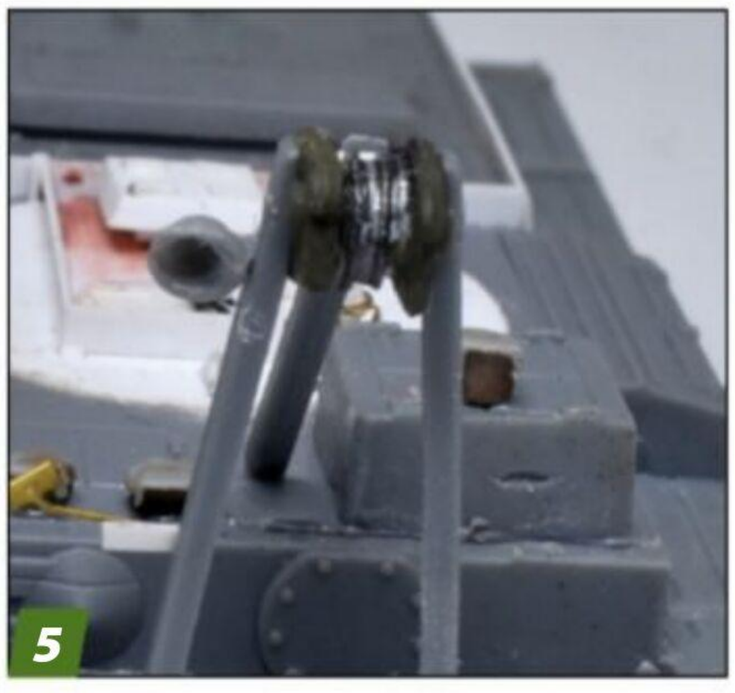
IBG Models have released 1/72 scale kits of the Cromwell and the Centaur antiaircraft tank, the Centaur 95mm howitzer-armed support vehicle, and bulldozer. Nicely detailed for the scale, the kits feature inner suspension and tracks molded together and correct, deeply dished, outer road wheels.

Correct the modifications

To replace the incorrectly shaped driver's and commander's periscopes molded on the upper hull, I used covers salvaged from a Dragon 1/72 scale Churchill III that I had scrapped from a previous project, ***1***.



Using the kit's PE flange and diagrams as patterns, I surrounded the engine deck, hatch, and ventilator with .010-inch styrene strip.



After thinning the halves of the kit's block, I sandwiched pulleys made by laminating different diameter styrene discs between them and glued the new block into the uprights.

To ensure the blade-lifting cables were properly tensioned, I rigged the block and tackle with .010-inch styrene rod.

◀To properly equip the Centaur bulldozer, I referred to stowage diagrams prepared in 1945 by the British Directorate of Tank Design. These drawings were invaluable in accurizing the flange on the engine deck.

It was easier to airbrush, hand-paint, and weather the outer wheels on the sprue.

I carefully flowed Tamiya Panel Line Accent Color Black (No. 87131) around raised details and into recesses as a pinwash.

To emphasize details and add highlights, I dry-brushed Humbrol Forest Green (No. 150) enamel lightened with white artist oil across the surface.

I laid out the rubble, sprayed it with windshield-washer fluid, and then used an eyedropper to apply a 50/50 mix of water and white glue.

The instructions call for a couple of panel lines on the rear deck to be filled and some lift handles removed to backdate it from the Meteor-powered Cromwell to the Liberty-engine Centaur, ***2***.

The pick head and handle molded on the left fenders looked anemic, so I filed them off and replaced them with items from my spares box.

The turret-ring cover plate is correct for IBG's Crusader antiaircraft tanks, but it is wrong for a Centaur 'dozer. After sanding off the molded turret surround, I cut a disc from .020-inch styrene sheet, ***3***.

The kit provides photo-etched metal (PE) parts for the edges of the engine deck for what I think is a flange to mount deep-water wading gear. To fit the parts, the crowbar and track-adjustment tool molded

on either side of the deck must be removed. I replaced them later with better looking tools from my spares.

Contemporary diagrams and photos of surviving vehicles showed the kit's PE flange was incomplete and omitted the front section as well as a separate, narrower extension around the hatch on the turret cover plate. Rather than use the PE parts, I made the entire flange using .010-inch styrene strip, ***4***.

The kit provides two headlights but no guidance on where they are located. References often only show one on the left side of the bow plate with a single guard. I made that from stretched sprue.

I replaced the omitted tow cable with thin lead wire and secured it to the right side with clips made from scrap PE. The fire extinguishers mounted just behind the stowage boxes on the fenders came from a Dragon 1/72 scale M4A4.

On the rear hull plate, I scratchbuilt new smoke dischargers and the first aid box, made a rack holding two jack blocks from styrene, and added shackles from my spares to the rear towing points.

Block and tackle

In a major omission, the kit lacks any indication of the pulley sheave and cable assemblies atop the A-frame that raise and lower the blade. The box-top illustration shows the blade in the raised position, cleverly eliminating the need to show this rigging. As molded, the blade is lowered and raising it would entail surgery to the side support girders. There are parts for the upper and lower blocks, but they are too narrow and lack pulley detail. In addition, the kit doesn't provide any material for the cable that rigs the blade.

I thinned the block parts and made pulleys from two different diameter discs punched from .010- and .020-inch styrene and sandwiched together, ***5***.

The cable is always under tension on the full-size Centaur bulldozer. After several unsuccessful attempts to replicate this using thread, I resorted to making the cables from sections of .010-inch styrene rod installed after painting, ***6***. The cover over the upper pulleys was made from .050-inch styrene sheet curved to fit and glued in place.

The driver's rearview mirror is a PE part from Dan Taylor Model Works, and I added antennas made from fine music wire.

Painting and weathering

This is one of those models that needs to be painted and weathered in subassemblies. For example, the suspension and tracks will be inaccessible once the blade support girders are in place.

I painted the suspension and hull sides with Tamiya Olive Drab (No. XF-62) lightened with Dark Yellow (No. XF-60), the tracks with Vallejo Model Air German Red Brown (No. 71.271), and picked out the road-wheel tires with Tamiya Medium Gray, (No. XF-20), ***7***.

Over a coat of clear gloss acrylic, I applied washes and the kit decals, ***8***.

I sealed the decals with Ammo Lucky Varnish Ultra-Matt (No. A.MIG-2050) and highlighted details with dry-brushing before adding a layer of brick, stone, and concrete dust using thinned burnt sienna and burnt umber artist oils, ***9***.

A simple base

I wanted to depict the 'dozer engaged in its primary mission, clearing German streets to open passage for other vehicles.

I covered a suitably sized wooden plaque with cobblestone-patterned styrene sheet and added a combination of crushed brick and plaster for the rubble, ***10***. After securing the rubble, I applied a black wash and powdered pastels to add texture. Once the Centaur was in place, I added a commander to the left front fender and littered the ground in front of the blade with a tattered Nazi poster to reinforce the vehicle's time and place. **FSM**

FSM experts build and evaluate new kits

Trumpeter TBD-1 Devastator

Trumpeter announced its 1/32 scale TBD-1 Devastator years ago, and it is finally here. The kit includes numerous options, like folded or unfolded wings, open or closed canopies, bombs or a torpedo, open or closed cowl flaps, and lowered or raised flaps. One unusual option is the open bomb sighting doors under the cockpit. These doors peg the kit as an early build because they were later changed for simpler doors with two hinges instead of three. Not included are the gunners' twin-machine-guns seen on some Devastators.

The easy-to-follow instructions do contain errors in the color diagrams: The "lemon yellow" VT-2 squadron color on the tail does not match the "chrome yellow" on the wings. Also, the wingtip navigation lights are just the tip of the molded-on lights, not the entire wing tip as shown.

The cockpit is reasonably detailed and includes the bomb aimer's compartment below the pilot. Not much is included here, but that's OK because it isn't easily visible. While the fuselage halves were still separate, I modified the too-long hinges of the bomb sighting doors so they would fit closed. All internal assemblies fit well and the instrument panel decals went down well over the molded detail.

The engine looks good, and the exhausts fit through the cowl cutouts perfectly. I left the engine and cowling off until after painting and decals.

The massive, corrugated wings assemble quickly. Don't forget to paint the area on the rear of the cockpit underside, visible through the torpedo cutout in the lower wing center section. I chose to model the wings folded, which allowed me to finish the outer wings separately and saved considerable shelf space. The hinges are adequately strong as long as you don't accidentally snap them, like I did. A steel tube helped correct that mental lapse.

The wheel hubs fit snugly to the sturdy landing gear and the rubber tires look good. Be gentle with the torpedo. I accidentally did a torpedo run, and the petite ring on the nose snapped off.

I used the optional closed canopy as a mask for the cockpit. Trumpeter included a double set of canopy masks — bless them — but I'm unsure whether they were intended as spares or internal masks. The instructions don't clarify either way. They fit easily and worked perfectly.

Photo-etched metal provides seat belts for the crew, torpedo "box," stabilizing fins, and various other small details. Decals are included for one pre-war TBD attached to VT-2 on the USS *Lexington* and an unidentified blue over gray option.

The decals lay down over the corrugated surfaces well, but take care — they are very thin and will fold with little encouragement. I lost one underwing insignia as a result, so I replaced it with the slightly smaller version from the other scheme. Unfortunately, the white is translucent. Disappointingly, the stencils are just simple black blocks, so I omitted all of them.

My Trumpeter 1/32 scale TBD-1 Devastator took slightly under 30 hours to complete. There are some issues to watch for, but the fit and subject matter can compensate for some of the ills, and others are easy to avoid now that you have been warned. I'd recommend a builder have a few models on their shelf before tackling this big beast.

– Chuck Davis

Kit No.: 02226 **Scale:** 1/32
Mfr.: Trumpeter, trumpeter-china.com (Sample courtesy of Model Rectifier Corp., modelrectifier.com)
Price: $139.99 **Comments:** Injection-molded plastic (gray, clear); 203 parts (24 photo-etched metal, 2 rubber); decals; masks **Pros:** Nice subject matter; good fits; canopy masks provided **Cons:** Translucent decals; "block" stencils; only rubber main wheel tires

Takom Tiger I Ausf E

Takom has now joined a wide field of manufacturers in producing a Tiger I kit. The Takom 1/35 scale Tiger I mid-production is a version specific to the tank ace Otto Carius. This initial release includes a nicely sculpted figure of him. Takom has done a beautiful job with the molded-on Zimmerit, and I didn't need to use putty anywhere.

The assembly consists of 26 steps, starting with the interior compartments. Those, while visible, end up mostly hidden after the grilles and screens go on. The running gear, though daunting, is a straightforward process with clear instructions. The link-and-length tracks are molded with properly hollow, separate guide teeth. Takom provides a jig to help with track assembly. Patience will help with the delicate parts. Another jig helps replicate the proper track sag behind the drive sprocket. I normally leave the wheels and tracks off until the end to simplify the painting process, but this time I added them per the instructions to help ensure I got a good, aligned fit.

After the tracks, I deviated from the instructions by building the basic chassis structures and turret and then adding the details. This reduced the number of pieces broken off during the build. Then came the Zimmerit panels and detail parts.

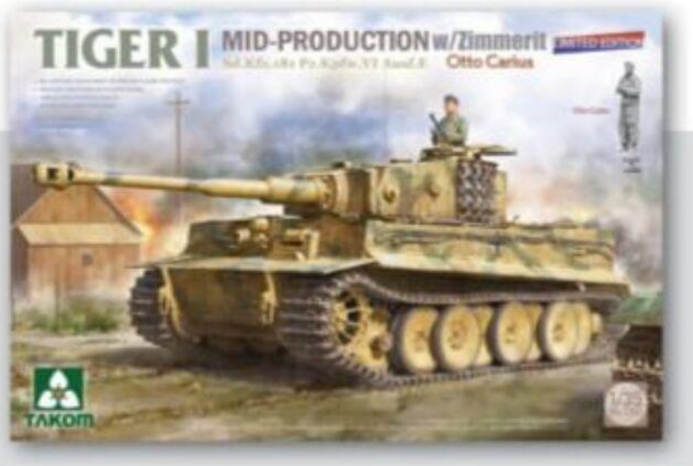
Takom provides twisted copper wire for the two tow cables. The instructions indicate each should be 204mm, but that was too long on my kit, so I ended up trimming mine to 199mm. The tools have nicely sculpted clamps. The photo-etched metal screens for the engine-deck grilles are too large and hung over the frame edges. If I were to build the kit again, I would replace them with aftermarket versions.

The turret assembly starts with the roof details and then focuses on the gun and detailed breech. The gun comes with a metal barrel, but the muzzle brake is still a multipart plastic component. The instructions for the spare track link brackets are vague about where the top bracket should be located, and there are no locator marks on the edge of the turret for them either. I ended up looking at references to locate them properly. When adding the clear periscopes to the commander's cupola, be careful. A helpful notch in their front mates to the receiving location, but you want the taller end up; the shorter end won't reach the periscope housing.

There are only five decals for each color option: a cross for each side of the chassis and identification numbers for the sides and back of the turret. These went down nicely over the Zimmerit.

The Takom 1/35 scale Tiger I mid-production with Zimmerit Otto Carius SdKfz 181 PzKpfw VI Ausf E was an enjoyable kit that balances accuracy and buildability. The engineering is great, and the chassis and turret build quickly. I spent 25 hours assembling and painting the kit, which is about average for a model of this complexity. Because of the complicated running gear and tracks, I would recommend this for intermediate modelers.

– David Nelson



Kit No.: 2200 **Scale:** 1/35 **Mfr:** Takom, takom-world.com (Sample courtesy of mfr.) **Price:** $57.99
Comments: Injection-molded plastic (light gray, clear); 804 parts (6 photo-etched metal; turned-metal barrel; twisted copper wire); decals **Pros:** Well-engineered kit; molded-on Zimmerit; accurate; buildable **Cons:** Instructions vague in spots; difficult tracks; no locators for spare track links on turret

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By Tim Boyd

MPC 1970 and 1971 Dodge Challengers

Don't look for these rarities to ever be reissued from the original molds

Late in 1969, Dodge introduced the Challenger, its first-ever "pony car." (Yes, there is a debate about what differentiates a pony car from a muscle car and what cars belong to which category, but let's leave that for another time.) MPC had been the source of all of Dodge's scale model kits and promotional models since 1965, so it was a given that it would design and produce the first scale replica of the Challenger.

Opening the kit, modelers found the parts molded in deep violet, a not-all-that-accurate attempt at the now-famous code FC-7 Dodge Plum Crazy Metallic. Under the standard Challenger R/T dual scoop hood resided a 426 Hemi with a non-stock intake/carb/air cleaner setup. There were no engine compartment sidewalls, leaving only the topside of underbody fenders visible to those looking under the scale hood. Typical of the day, neither of the 1/1 scale Challenger R/T stripe treatments were replicated on the decal sheet.

The interior depicted the standard Challenger instrument panel, not the performance oriented "Rallye" cluster option. The two-piece chassis included all detail molded in place except for a separate axle/leaf spring unit.

Out of the box, optional build versions received minimalist treatment. The Barris-designed mild custom added side exhausts, a plated hood blister, and a landau-style roof molding. The SS/B class drag racer featured a roll bar, a non-stock rear airfoil spoiler, and a large, full-color, side-panel graphic decal. The optional wheels were American 200-S Daisy mags. Another kit accessory was a utility trailer (the same trailer is reproduced in Round 2's new MPC 1/25 scale 1968 Coronet R/T kits).

A year later, the 1/1 scale 1971 Challenger carried over largely intact, and the same can be said of MPC's follow-up 1971 Challenger R/T. This time the kit was molded in a relatively accurate approximation of the 1/1 scale High Impact code FJ-5 Sublime Green. The kit was updated with the new grille, taillights, and rear quarter panel fake scoops of its 1/1 scale subject. The 1970 kit custom and drag version parts carried over, minus the large, side-panel decal. The utility trailer option was also eliminated.

The most notable difference was a change in the kit's focus to "Mild and Wild" merchandising. Inspired by its highly successful Zinger kits, MPC adapted a similar design approach to its 1971 annual kits. The outlandish "Put-On" features in this kit included a huge hood scoop, hood padlock locks, an extreme raised rear ride height, a skyscraper rear spoiler, and a complementary decal sheet.

MPC's Challenger tool was later updated to replicate Dodge's 1972, 1973, and 1974 factory-stock pony cars, as well as being modified for a Pro Stock kit, and finally, a Funny Car kit body. As such, the MPC 1970 and 1971 Challenger kits are unlikely to ever be reissued in these forms again, thus explaining the roughly $300 asking price for mint condition, unbuilt, original kits. **FSM**

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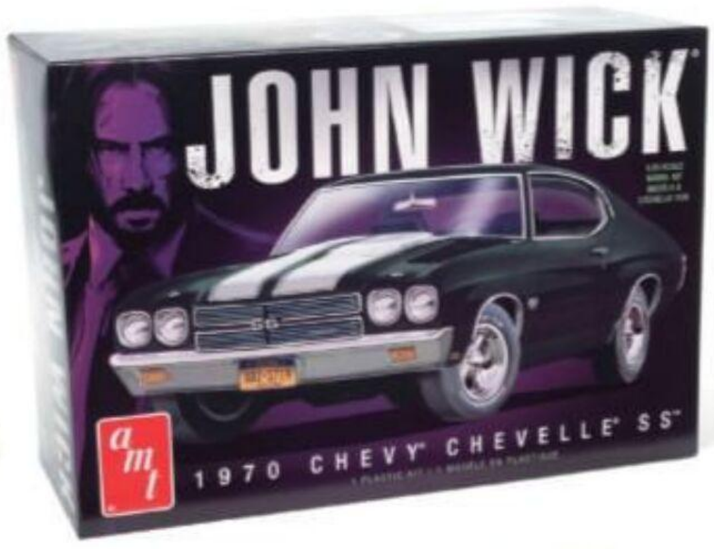

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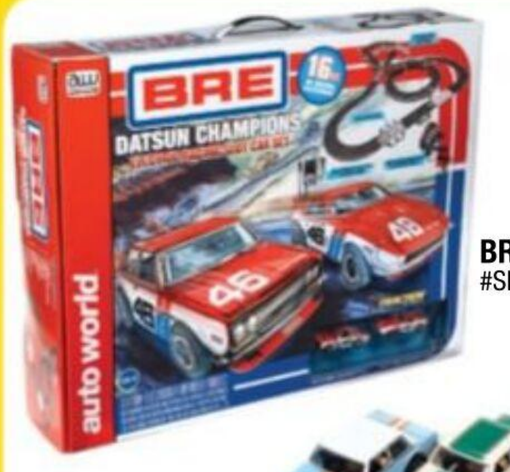

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